Pioneer sound.vision.soul

Service Manual

ORDER NO.
ARP3254

MEDIA RECEIVER

PDP-AR05U

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-AR05U	KUC	AC120V	

- **This service manual should be used together with the following manual(s):**

Model No.	Order No.	Remarks
PDP-R05U/KUC	ARP3213	

- **For SPECIFICATIONS and PANEL FACILITIES, refer to the operating instructions.**
- **Please connect it to the PLASMA DISPLAY PDP-505PU or PDP-435PU for adjustment and operation inspection.**

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

T – ZZK DEC. 2004 Printed in Japan

1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *Reference Nos. indicate the pages and Nos. in the service manual for the base model.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 × 10¹ → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 × 10³ → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 × 10¹ → 5621 ..... RN1/4PC 5 6 2 1 F

■ CONTRAST TABLE

PDP-AR05U/KUC and PDP-R05U/KUC are constructed the same except for the following :

Ref. No.	Mark	Symbol and Description	Part No. PDP-R05U /KUC	Part No. PDP-AR05U /KUC	Remarks
		PCB ASSEMBLIES			
	NSP	MR MAIN BOARD ASSY	AWV2127	AWV2196	
P11- 1		└ MAIN BOARD ASSY	AWZ6926	AWW1002	
		PACKING SECTION			
P7-19		Carton	AHD3244	AHD3335	
		EXTERIOR (1) SECTION			
P9-33	NSP	Label	AAX3131	AAX3168	
		Label (BLUE8)	AAX2786	Not used	
		Label (BLUE16)	AAX2787	Not used	
		EXTERIOR (2) SECTION			
P11-19		Terminal Panel	ANC2361	ANC2372	
		FRONT PANEL SECTION			
P13- 5		Front Panel Assy	AXG1027	AXG1026	
P13-13		Front Panel	AMB2826	AMB2856	

■ CONTRAST OF PCB ASSEMBLIES

AF MR MAIN BOARD ASSY

Although AWW1002 and AWZ6926 are different in part number, they consist of the same components.

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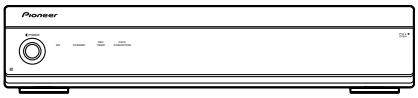
Service Manual



PDP-R05U

ORDER NO.
ARP3213

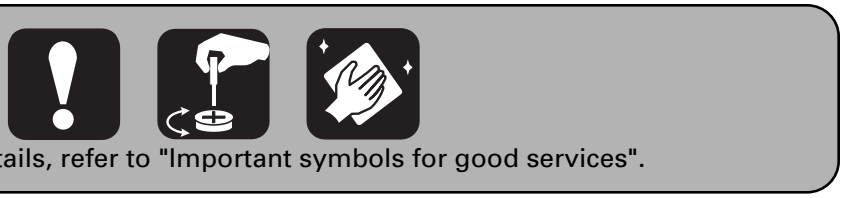
MEDIA RECEIVER

PDP-R05U
PRO-R05U

THIS MANUAL IS APPLICABLE TO THE FOLLOWINGMODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-R05U	KUC	AC120V	
PRO-R05U	KUC	AC120V	

Please connect it to the PLASMA DISPLAY PDP-505PU, PDP-435PU, PRO-505PU or PRO-435PU for adjustment and operation inspection.



For details, refer to "Important symbols for good services".

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T-ZZK SEPT. 2004 printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.

Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

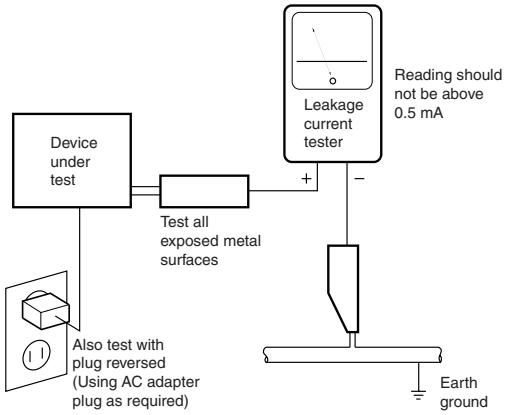
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

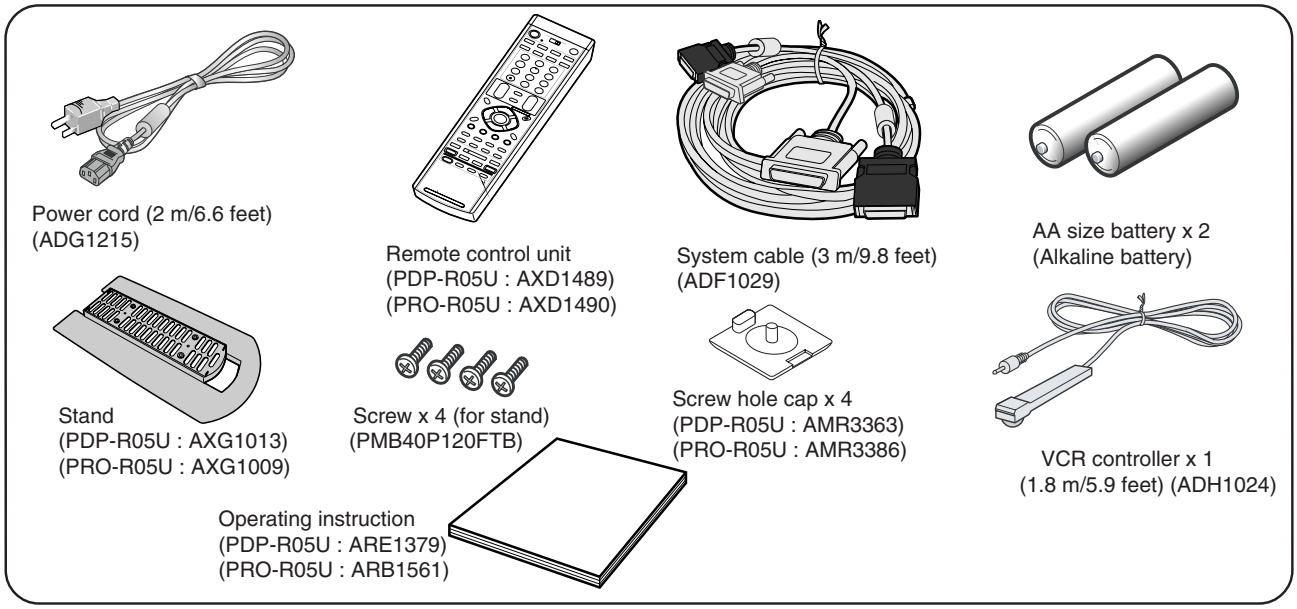
Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

CONTENTS

1. SPECIFICATIONS

Item			Media Receiver , Model: PDP-R05U
Reception System (Digital)			ATSC Digital TV system
	Circuit type		8VSB/64QAM/256QAM/QPSK demodulation
	Tuner	VHF/UHF	VHF 2-13ch, UHF 14-69ch
		CATV	2-135ch
	Audio format		Dolby Digital
Reception System (Analog)			American TV standard NTSC system
	Circuit type		Video signal detection PLL full synchronous detection, PLL digital synthesizer system
	Tuner	VHF/UHF	VHF 2-13ch, UHF 14-69ch
		CATV	ANTENNA/CABLE A IN: 1-135ch Cable: 1-125ch
	Audio multiplex		BTSC system
Terminals	Rear	ANTENNA/CABLE A IN	75Ω UNBAL, F Type for DTV/VHF/UHF/CATV in
		ANTENNA B	75Ω UNBAL, F Type for VHF/UHF/CATV in Loop out
		i.LINK (TS)	S400 (2)
		INPUT 1	COMPONENT VIDEO in, S-VIDEO in, VIDEO in, AUDIO in, HDMI in
		INPUT 2	S-VIDEO in, VIDEO in, AUDIO in
		INPUT 3	COMPONENT VIDEO in, AUDIO in, HDMI in
		Monitor Out	S-VIDEO out, VIDEO out, AUDIO out
		Digital Audio Output	Optical (1)
		VCR Control Output	1
		CONTROL IN	1
		CONTROL OUT	1
		Cable CARD	Point of Deployment
	Front	INPUT 4	COMPONENT VIDEO in, S-VIDEO in, VIDEO in, AUDIO in
		PC	Analog RGB in, AUDIO in
OSD			English/French/Spanish
Power Requirement			120 V AC, 60 Hz, 43.3 W (31 W Standby ,120 V)
Dimensions			420 (W) · 90 (H) · 295 (D) mm (16 9/16 (W) · 3 9/16 (H) · 11 10/16 (D) inches)
Weight			5.8 kg (12.8 lbs.)

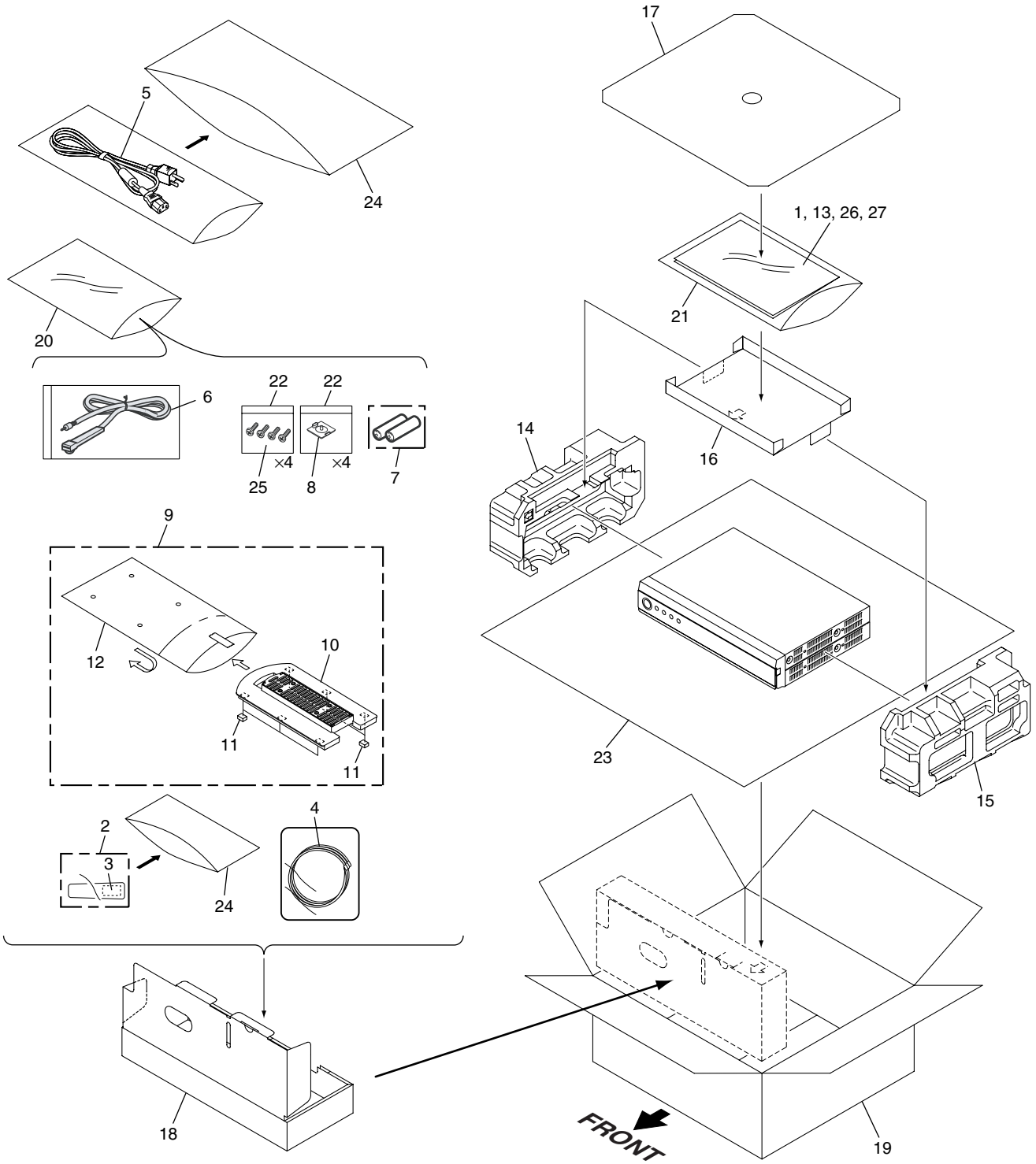
- Design and specifications are subject to change without notice.



2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING



PACKING SECTION Parts List

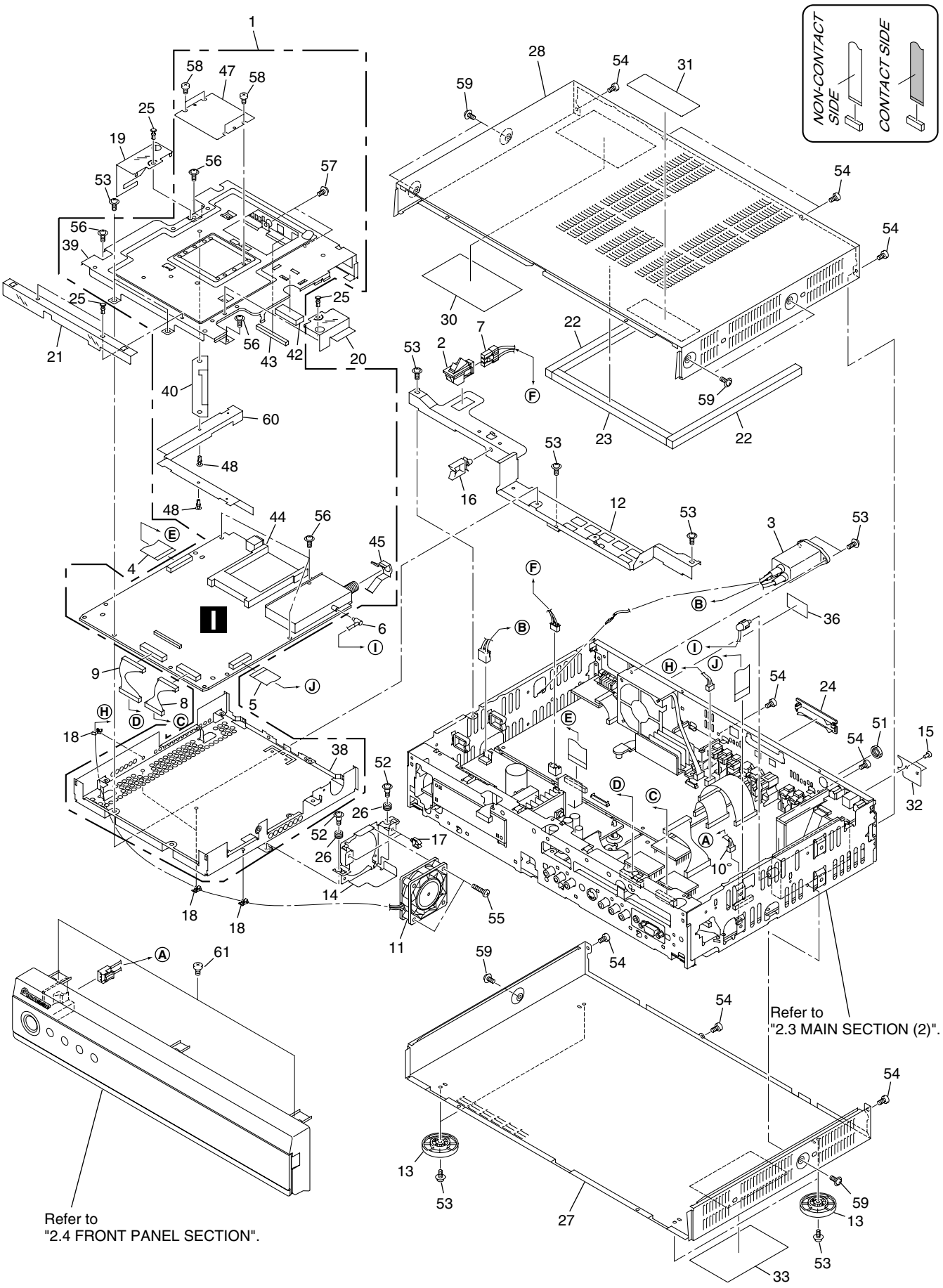
Mark	No.	Description	Part No.
	1	Operating Instructions	See Contrast table (2)
	2	Remote Control Unit	See Contrast table (2)
	3	Battery Cover	AZA7424
	4	System Cable (3m)	ADF1029
⚠	5	Power Cord	ADG1215
	6	VCR Controller (1.8m)	ADH1024
NSP	7	Dry Cell Battery (LR6/AA)	VEM1021
	8	Screw Hole Cap	See Contrast table (2)
	9	Stand Assy	See Contrast table (2)
NSP	10	Stand	See Contrast table (2)
NSP	11	Stand Cushion	AEB1390
	12	Laminated Sheet Bag	AHG1334
NSP	13	Card	VRY1132
	14	Pad L	AHA2370
	15	Pad R	AHA2371
	16	IM Pad	AHB1253
	17	Top Pad	AHB1256
	18	Accessory Box	AHC1053
	19	Carton	See Contrast table (2)
NSP	20	Literature Bag	AHG1303
	21	Vinyl Bag	AHG1340
	22	Vinyl Bag	AHG1337
	23	Laminated Sheet	AHG1350
	24	Air Capsule Bag	AHG1351
	25	Screw	PMB40P120FTB
	26	Manual Sheet	See Contrast table (2)
	27	DCR User Card	ARY1157

(2) CONTRAST TABLE

PDP-R05U/KUC and PRO-R05U/KUC are constructed the same except for the following:

Mark	No.	Description	PDP-R05U/KUC	PRO-R05U/KUC
	1	Operating Instructions (English/French/Spanish)	ARE1379	Not used
	1	Operating Instructions (English)	Not used	ARB1561
	2	Remote Control Unit	AXD1489	AXD1490
	8	Screw Hole Cap	AMR3363	Not used
	8	Screw Hole Cap UE	Not used	AMR3386
	9	Stand Assy	AXG1013	Not used
	9	Stand Assy UE	Not used	AXG1009
NSP	10	Stand	AMR3352	Not used
NSP	10	Stand UE	Not used	AMR3382
	19	Carton U	AHD3244	Not used
	19	Carton UE	Not used	AHD3245
	26	Manual Sheet	ARM1259	Not used

2.2 EXTERIOR(1)



EXTERIOR(1) SECTION PARTS LIST

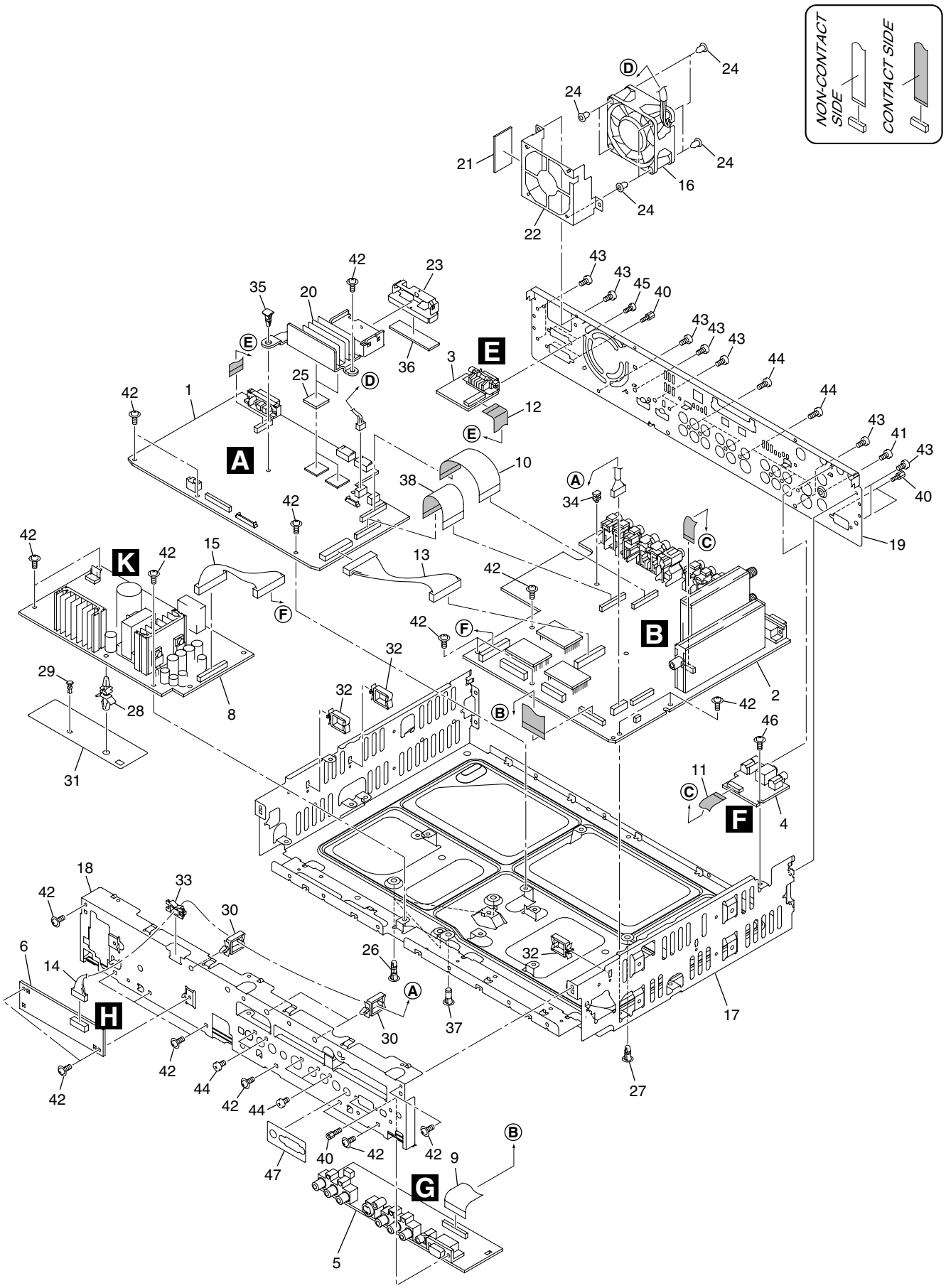
Mark	No.	Description	Part No.
	1	TUNER BOARD Assy (U)	AWE1300
⚠	2	Power Switch (TRAP)(S1)	ASG1089
⚠	3	AC Inlet (CN1)	AKP1272
	4	Flexible Cable (J201)	ADD1266
	5	Flexible Cable (J204)	ADD1267
	6	Plug Cord	ADE1191
	7	3P Housing Wire (J107)	ADX2836
	8	12P Housing Wire (J109)	ADX2918
	9	14P Housing Wire (J110)	ADX2919
	10	3P Housing Wire (J114)	ADX3067
⚠	11	Fan Motor 52 x 15L	AXM1048
	12	Center Stay U	ANG2668
	13	Leg Assy	AXG1012
	14	Fan Holder 50	ANG2681
NSP	15	Clip	AEC-036
	16	Wire Saddle	AEC1745
	17	Mini Clamp	AEC1967
	18	Side Type Mini Clamp	AEC2003
	19	Wind Stopper A	AEC2006
	20	Wind Stopper B	AEC2007
	21	Wind Stopper C	AEC2008
	22	DTV Cushion L	AED1261
	23	DTV Cushion S	AED1262
	24	Rear Cover	AMR3425
	25	Rivet A	BEC1158
NSP	26	Float Rubber RS1	DEB1569
	27	Metal Bonnet Bottom	See Contrast table (2)
	28	Bonnet Top	See Contrast table (2)
	29	Serial Sheet	AAX2609
	30	Solder Warning Label	AAX2644
	31	Caution Label (U)	AAX2999
	32	SR-Cover	AAX3066
NSP	33	Label	See Contrast table (2)
	34	• • • • •	
	35	• • • • •	
NSP	36	Serial Label	ARW1100
	37	• • • • •	
NSP	38	Case Bottom	ANA1778
	39	Case Top	ANG2659
	40	Wind Reflector 2	AEC2011
⚠	41	Gasket C	AEC2014
⚠	42	Gasket A	AEC7528
⚠	43	Gasket B	AEC7529
⚠	44	PCMCIA Ejector	ANG2673
⚠	45	Ground Plate B	ANG2699
	46	• • • • •	
	47	Top Cover	ANG2706
	48	Rivet A	BEC1158
	49	• • • • •	
	50	• • • • •	
	51	Washer	BBN1005
	52	Screw	ABA1317
	53	Screw	ABZ30P080FTC
	54	Screw	BBZ30P060FTB
	55	Screw	BBZ30P200FTC
	56	Screw	ABZ30P060FTC
	57	Screw	BBZ30P080FTC
	58	Screw	PMZ20P080FTC
	59	Screw	See Contrast table (2)
	60	Wind Reflector	AEC7521
	61	Screw	ABZ30P060FTB

(2) CONTRAST TABLE

PDP-R05U/KUC and PRO-R05U/KUC are constructed the same except for the following:

Mark	No.	Description	PDP-R05U/KUC	PRO-R05U/KUC
	27	Metal Bonnet Bottom	ANE1632	Not used
	27	Metal Bonnet Bottom (UE)	Not used	ANE1634
	28	Bonnet Top (U)	ANE1636	Not used
	28	Bonnet Top (UE)	Not used	ANE1633
NSP	33	Label U	AAX3131	Not used
NSP	33	Label UE	Not used	AAX3132
	59	Screw	ABZ30P080FTC	ABZ30P060FTB

2.3 EXTERIOR(2)



EXTERIOR(2) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	MR MAIN BOARD Assy	AWZ6926
	2	AV BOARD Assy	See Contrast table (2)
	3	MDR Assy	AWZ6922
	4	SR Assy	AWZ6923
	5	FRONT Assy	See Contrast table (2)
	6	LED Assy	AWZ6925
	7	• • • • •	
⚠	8	POWER SUPPLY Unit	AXY1091
	9	Flexible Cable (J205)	ADD1209
	10	Flexible Cable (J203)	ADD1210
	11	Flexible Cable (J206)	ADD1213
	12	Flexible Cable (J207)	ADD1214
	13	15P Housing Wire (J105)	ADX2833
	14	7P Housing Wire (J113)	ADX2914
	15	16P Housing Wire (J112)	ADX2917
⚠	16	Fan Motor 60 x 25L	AXM1047
	17	Base Chassis	See Contrast table (2)
	18	Front Chassis	See Contrast table (2)
	19	Terminal Panel	See Contrast table (2)
	20	Heatsink HDMI	ANH1618
	21	DVI Cushion	AEB1396
	22	Fan Holder	ANG2568
	23	HDMI Shield	ANG2646
	24	Insulation Rubber	AEB1377
	25	Silicone Sheet HDMI	AEB1379

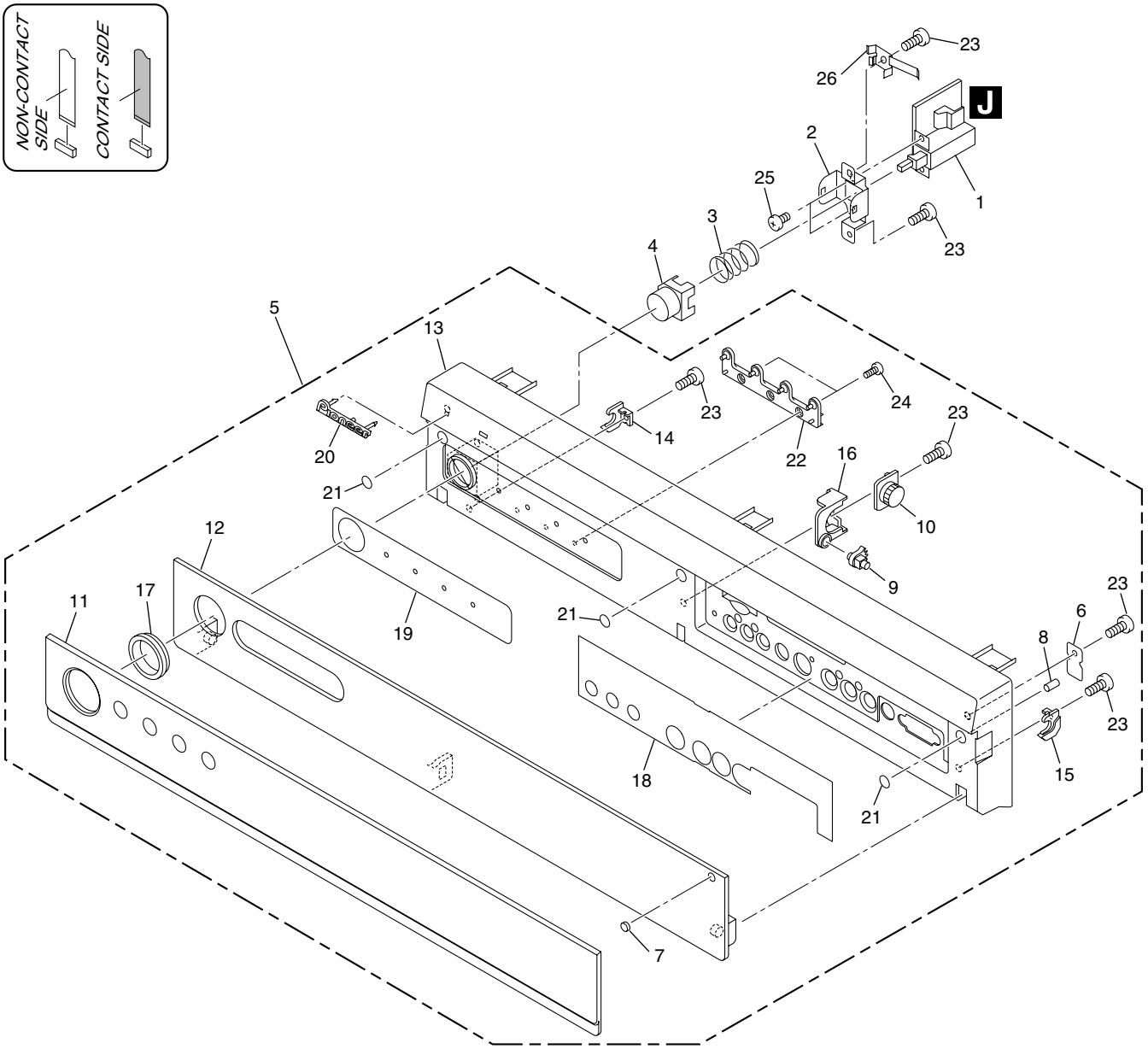
Mark	No.	Description	Part No.
	26	PCB Holder	AEC1097
	27	Spacer	AEC1256
	28	Locking Card Spacer	AEC1429
	29	Nyron Rivet	AEC1671
	30	Wire Saddle	AEC1745
	31	Barrier A	AEC1936
	32	Re-use Wire Saddle	AEC1945
	33	Edge Saddle	AEC1946
	34	Mini Card Spacer	AEC1959
	35	Circuit Board Spacer	AEC1964
	36	Gasket F	ANK1722
	37	Card Spacer A	BEC1120
	38	Flexible Cable (J202)	ADD1209
	39	• • • • •	
	40	Hexagon Head Screw	BBA1051
	41	Screw	ABZ30P060FTB
	42	Screw	ABZ30P080FTC
	43	Screw	BBZ30P060FTB
	44	Screw	BPZ30P100FTB
	45	Screw	PMZ26P060FTB
	46	Screw	BMZ30P060FTC
	47	Front Chassis Sheet	AEC2010

(2) CONTRAST TABLE

PDP-R05U/KUC and PRO-R05U/KUC are constructed the same except for the following:

Mark	No.	Description	PDP-R05U/KUC	PRO-R05U/KUC
	2	AV BOARD Assy	AWZ6978	AWZ6979
	5	FRONT Assy	AWZ6924	AWZ6928
	17	Base Chassis U	ANA1812	Not used
	17	Base Chassis UE	Not used	ANA1817
	18	Front Chassis	ANB1866	Not used
	18	Front Chassis UE	Not used	ANB1868
	19	Terminal Panel U	ANC2361	Not used
	19	Terminal Panel UE	Not used	ANC2367

2.4 FRONT PANEL SECTION



FRONT PANEL SECTION Parts List

Mark	No.	Description	Part No.
	1	SW Assy	AWZ6977
	2	SW Holder	ANG2670
	3	SW Spring	ABH1109
	4	Power Button	See Contrast table (2)
	5	Front Panel Assy	See Contrast table (2)
	6	Magnet Holder	ANG2671
	7	Magnet Catcher	ANG2675
	8	Magnet	AMF1004
	9	Gear	AMR3418
	10	Damper	AXA1018
	11	Panel	See Contrast table (2)
	12	Door	AAN1473
	13	Front Panel	See Contrast table (2)
	14	Door Holder L	AMR3414
	15	Door Holder R	AMR3415
	16	Damper Holder	AMR3416
	17	Escutcheon Ring	See Contrast table (2)
	18	Sealing Sheet	See Contrast table (2)
	19	Sealing Sheet S	See Contrast table (2)
	20	Pioneer Badge	See Contrast table (2)
	21	Door Cushion	See Contrast table (2)
	22	LED Lens	AMR3417
	23	Screw	BPZ30P100FTB
	24	Screw	JPZ20P035FNI
	25	Screw	BMZ30P060FTC
	26	Groundig Spring KU	ANG2717

(2) CONTRAST TABLE

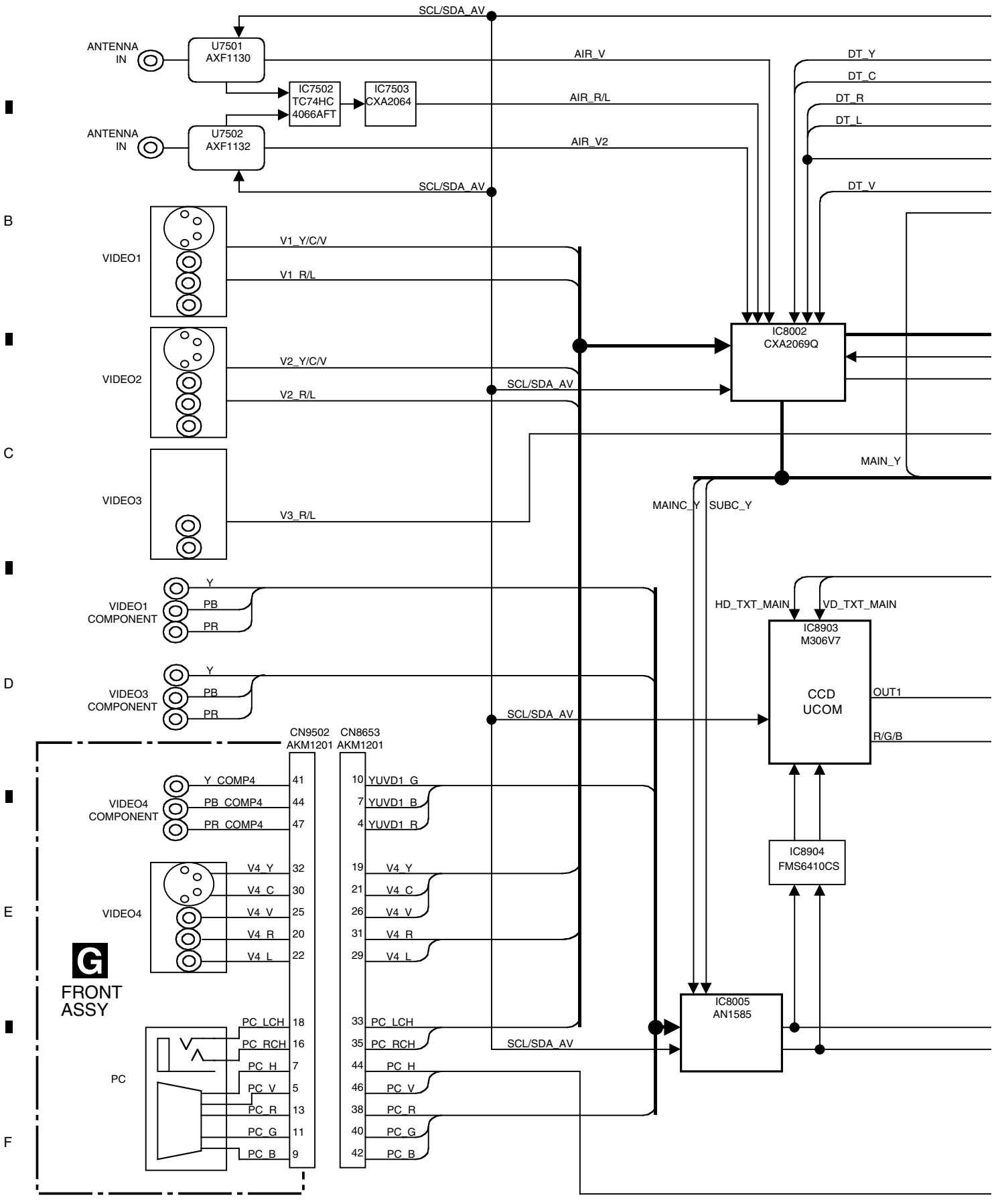
PDP-R05U/KUC and PRO-R05U/KUC are constructed the same except for the following:

Mark	No.	Description	PDP-R05U/KUC	PRO-R05U/KUC
	4	Power Button	AAD4128	Not used
	4	Power Button (UE)	Not used	AAD4129
	5	Front Panel Assy U	AXG1018	Not used
	5	Front Panel Assy UE	Not used	AXG1019
	11	Panel (U)	AAK2823	Not used
	11	Panel (UE)	Not used	AAK2824
	13	Front Panel (U)	AMB2826	Not used
	13	Front Panel (UE)	Not used	AMB2827
	17	Escutcheon Ring	AAD4130	Not used
	17	Escutcheon Ring (UE)	Not used	AAD4132
	18	Sealing Sheet (U)	AAL2545	Not used
	18	Sealing Sheet (UE)	Not used	ALL2546
	19	Sealing Sheet S (U)	AAL2552	Not used
	19	Sealing Sheet S (UE)	Not used	AAL2553
	20	Pioneer Badge	VAM1124	Not used
	20	Pioneer Badge B	Not used	PAN1376
	21	Door Cushion	AEB1391	AEB1394

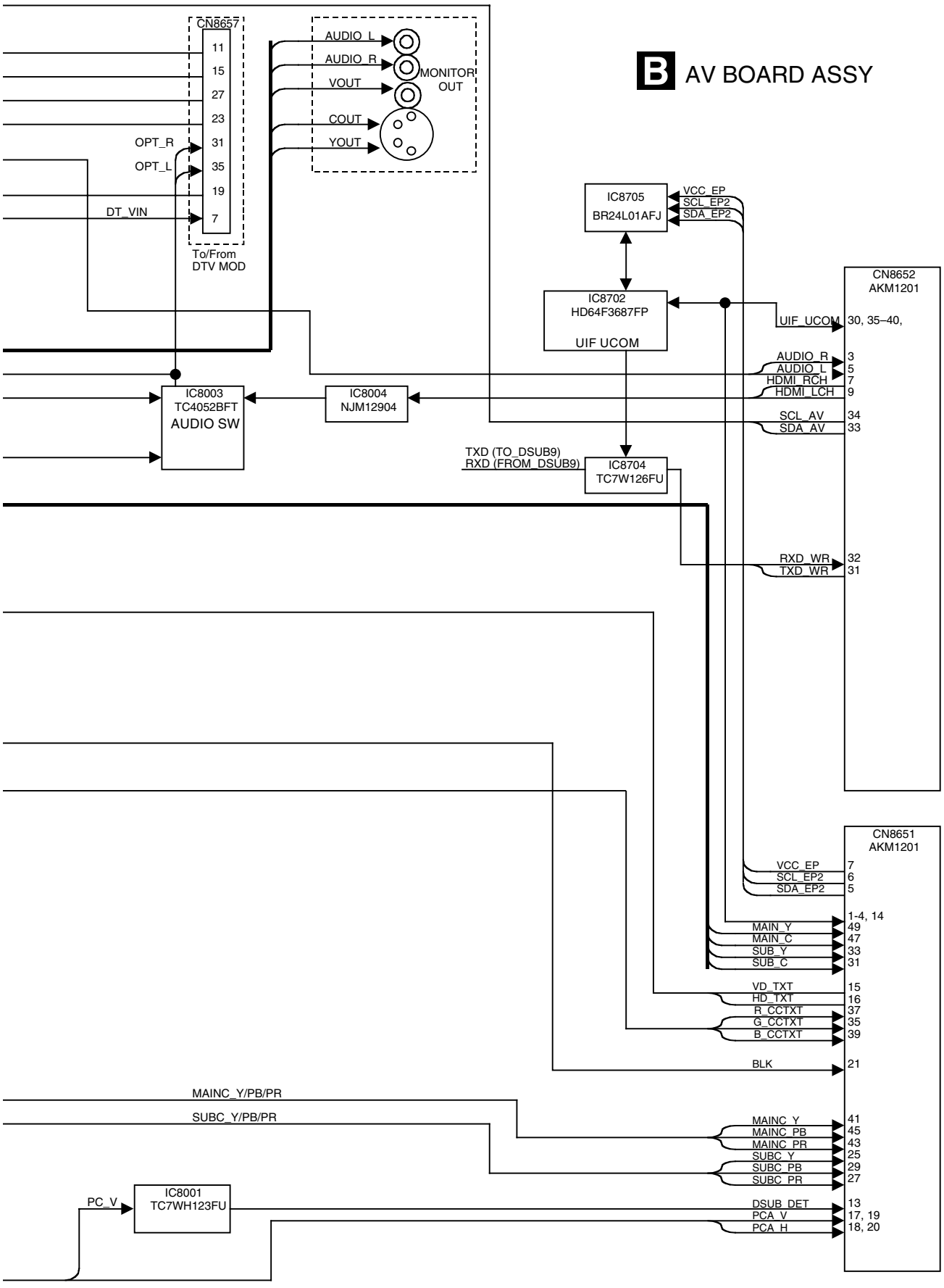
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

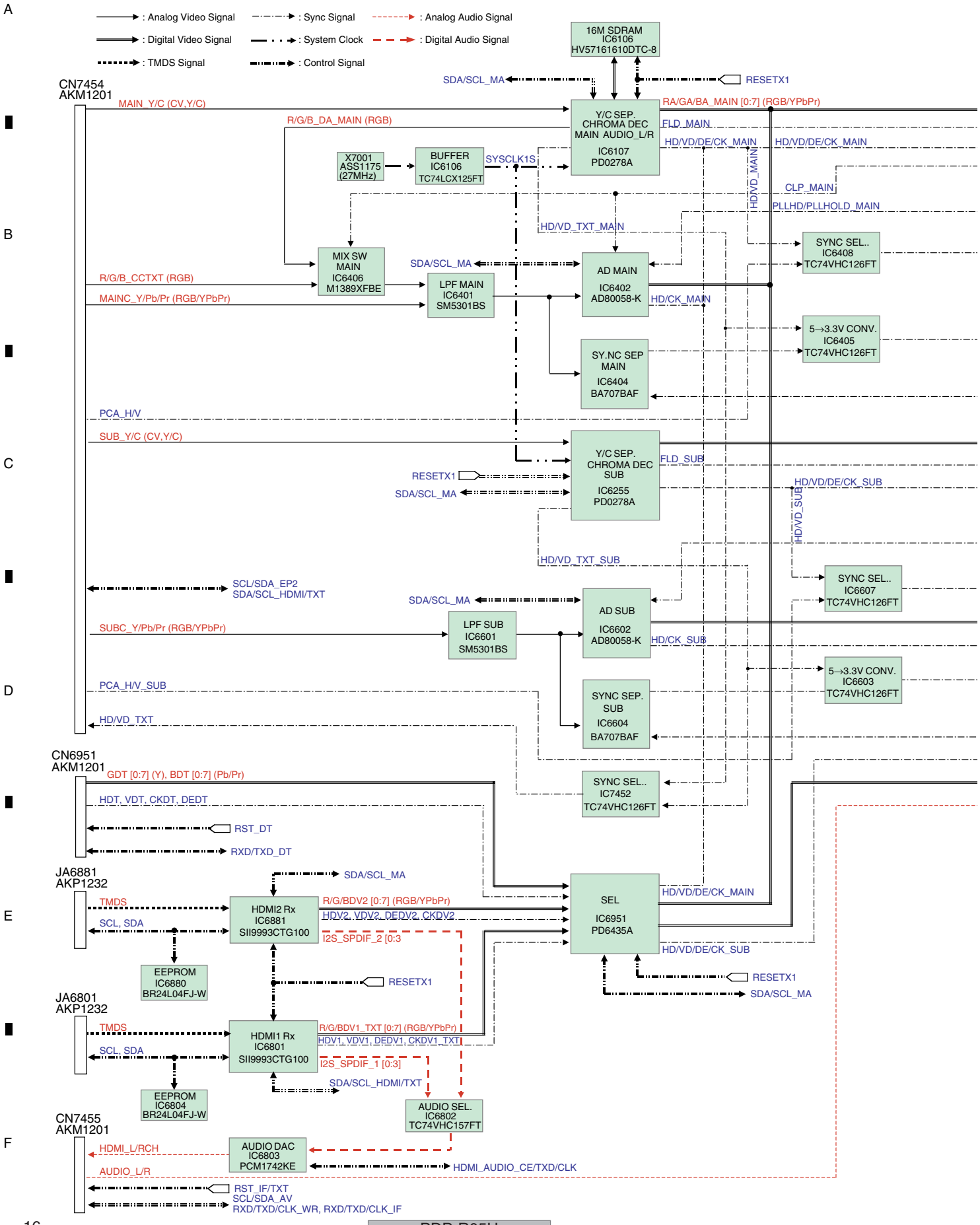
3.1.1 AV BOARD ASSY

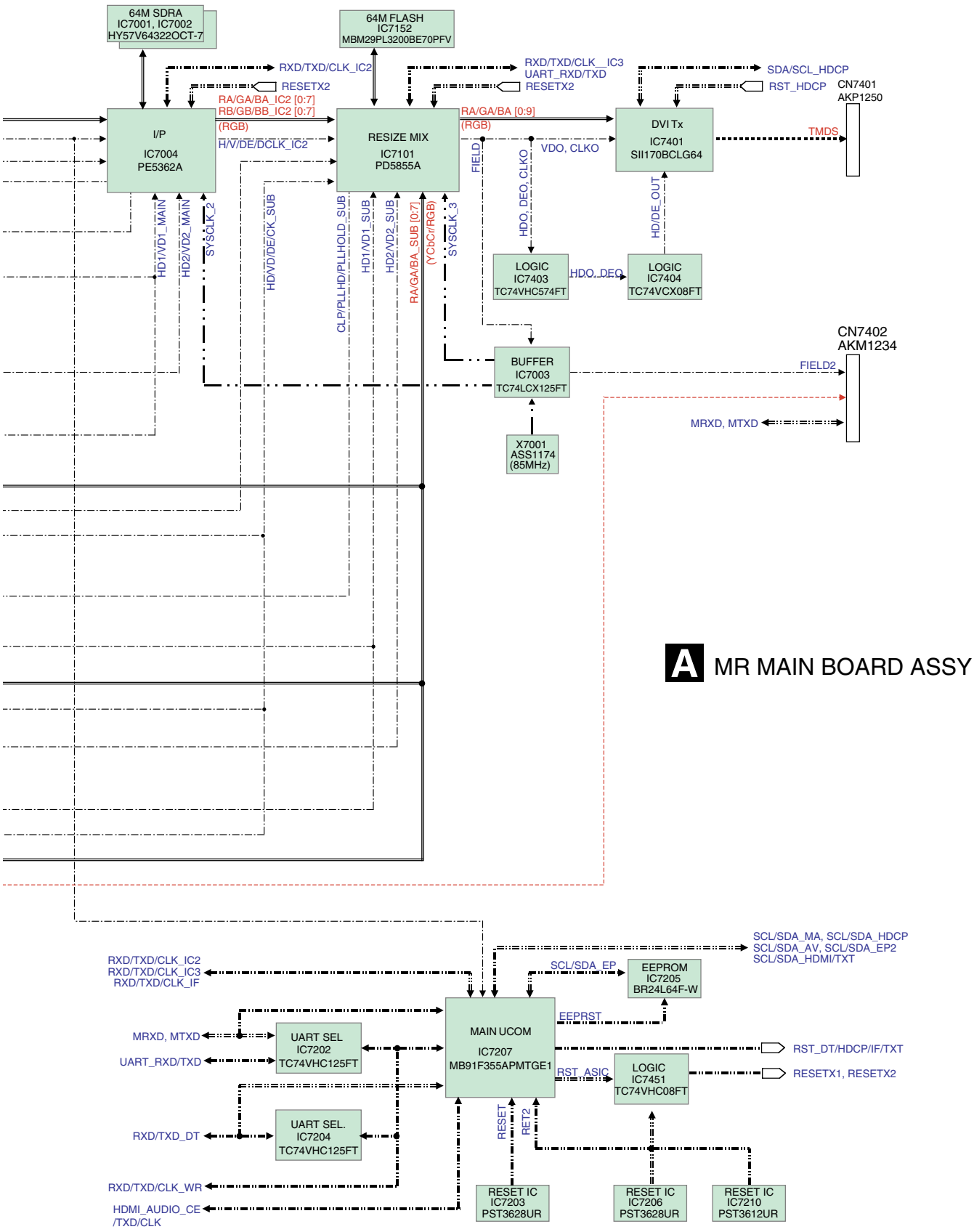


B AV BOARD ASSY

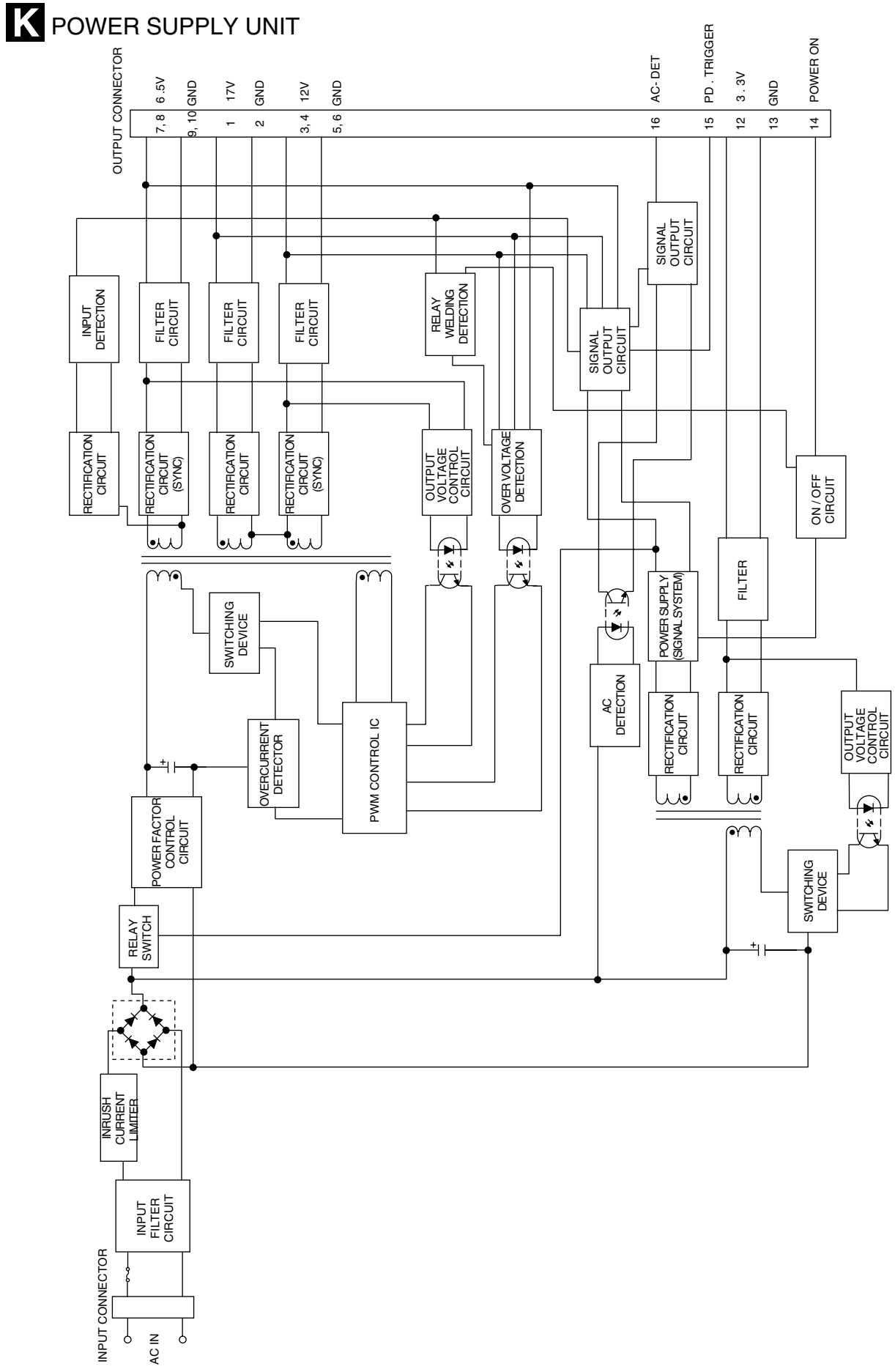


3.1.2 MR MAIN BOARD ASSY

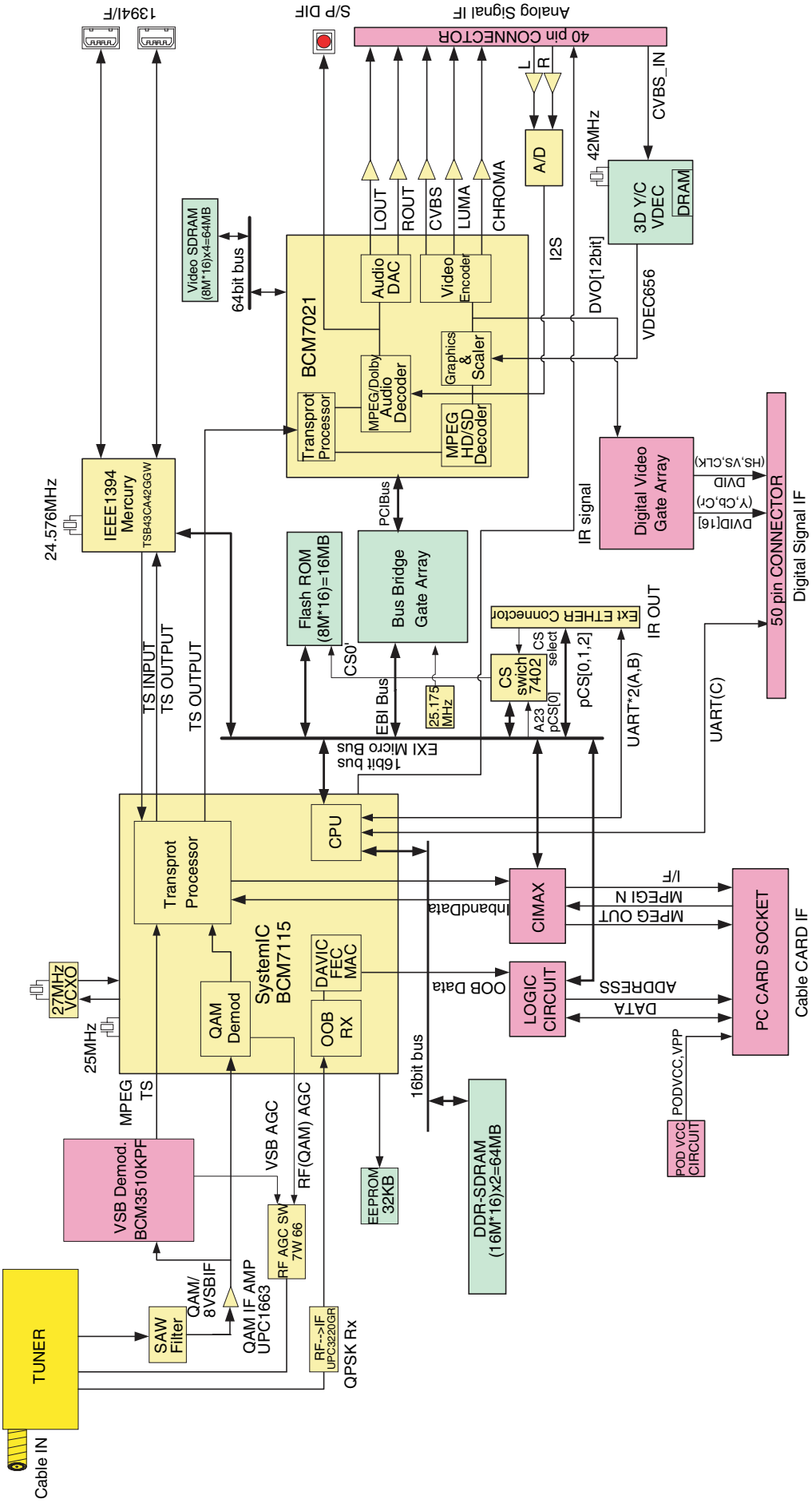



64M SDRA
IC7001, IC7002
HY57V64322OCT-7
64M FLASH
IC7152
MBM29PL3200BE70PFV
RXD/TXD/CLK_IC2
RESETX2
RA/GA/BA_IC2 [0:7]
RB/GB/BB_IC2 [0:7]
(RGB)
H/V/DE/DCLK_IC2
RXD/TXD/CLK__IC3
UART_RXD/TXD
RESETX2
RA/GA/BA [0:9]
(RGB)
SDA/SCL_HDCP
RST_HDCP
CN7401
AKP1250
TMDS
I/P
IC7004
PE5362A
RESIZE MIX
IC7101
PD5855A
DVI Tx
IC7401
SII170BCLG64
FIELD
VDO, CLKO
HDO, DEO, CLKO
HD/DE_OUT
HD1/VD1_MAIN
HD2/VD2_MAIN
SYSCLK_2
HD/VD/DE/CK_SUB
CLP/PLLHD/PLLHOLD_SUB
HD1/VD1_SUB
HD2/VD2_SUB
RA/GA/BA_SUB [0:7]
(YCbCr/RGB)
SYSCLK_3
LOGIC
IC7403
TC74VHC574FT
HDO, DEO
LOGIC
IC7404
TC74VCX08FT
CN7402
AKM1234
BUFFER
IC7003
TC74LCX125FT
FIELD2
MRXD, MTXD
X7001
ASS1174
(85MHz)
A
MR MAIN BOARD ASSY
SCL/SDA_MA, SCL/SDA_HDCP
SCL/SDA_AV, SCL/SDA_EP2
SCL/SDA_HDMI/TXT
RXD/TXD/CLK_IC2
RXD/TXD/CLK_IC3
RXD/TXD/CLK_IF
SCL/SDA_EP
EEPROM
IC7205
BR24L64F-W
EEPRST
MRXD, MTXD
UART_RXD/TXD
UART SEL
IC7202
TC74VHC125FT
MAIN UCOM
IC7207
MB91F355APMTGE1
RST_DT/HDCP/IF/TXT
RST_ASIC
LOGIC
IC7451
TC74VHC08FT
RESETX1, RESETX2
RXD/TXD_DT
UART SEL.
IC7204
TC74VHC125FT
RESET
RET2
RXD/TXD/CLK_WR
HDMI_AUDIO_CE
/TXD/CLK
RESET IC
IC7203
PST3628UR
RESET IC
IC7206
PST3628UR
RESET IC
IC7210
PST3612UR

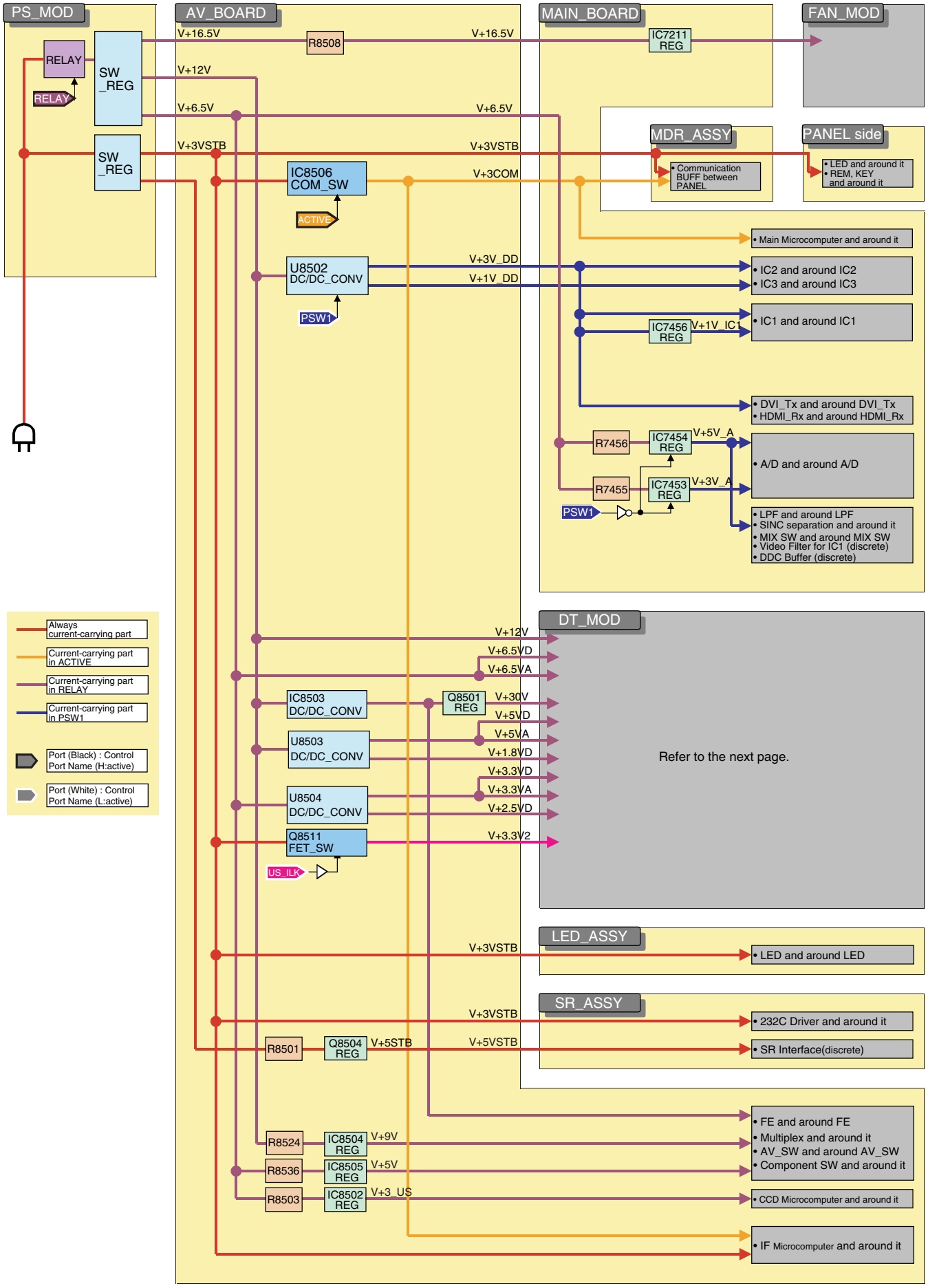
3.1.3 POWER SUPPLY UNIT

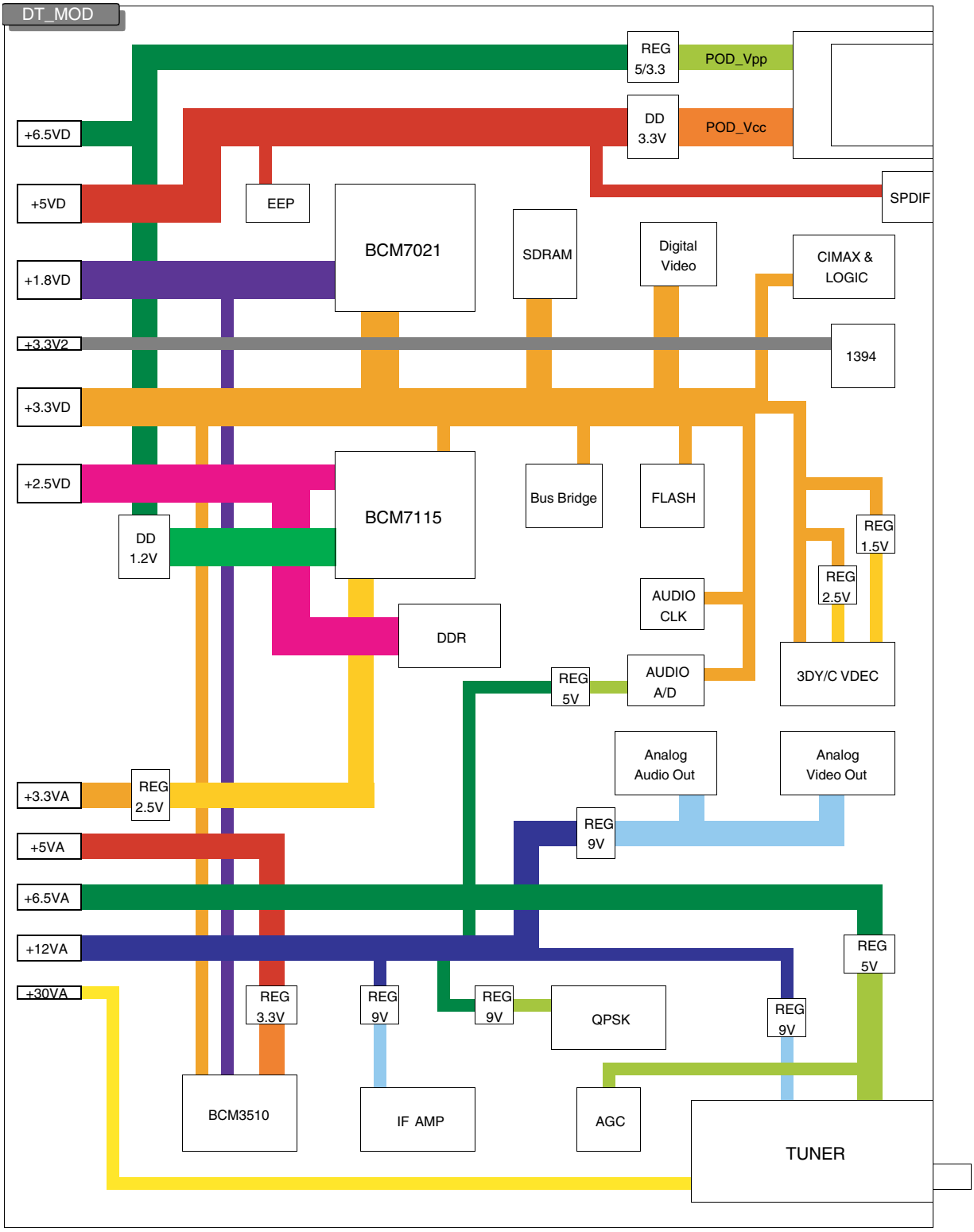


3.1.4 TUNER BOARD ASSY

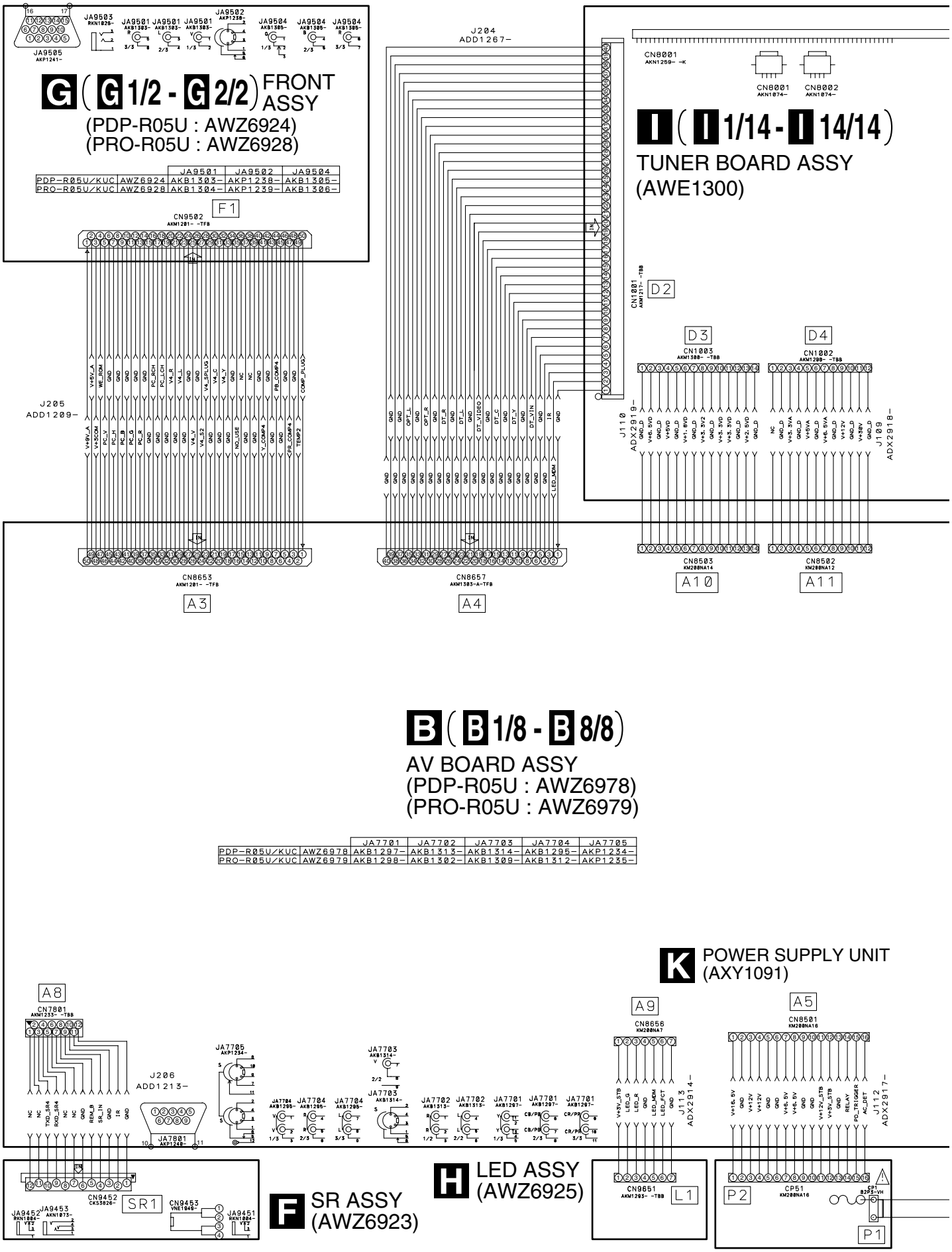


3.1.5 POWER SUPPLY




DT_MOD
REG 5/3.3
POD_Vpp
DD 3.3V
POD_Vcc
+6.5VD
+5VD
+1.8VD
+3.3V2
+3.3VD
+2.5VD
DD 1.2V
EEP
BCM7021
SDRAM
Digital Video
CIMAX & LOGIC
SPDIF
1394
BCM7115
Bus Bridge
FLASH
REG 1.5V
REG 2.5V
AUDIO CLK
DDR
AUDIO A/D
3DY/C VDEC
REG 5V
Analog Audio Out
Analog Video Out
REG 2.5V
+3.3VA
REG 9V
+5VA
+6.5VA
+12VA
+30VA
REG 5V
REG 3.3V
REG 9V
REG 9V
QPSK
REG 9V
BCM3510
IF AMP
AGC
TUNER

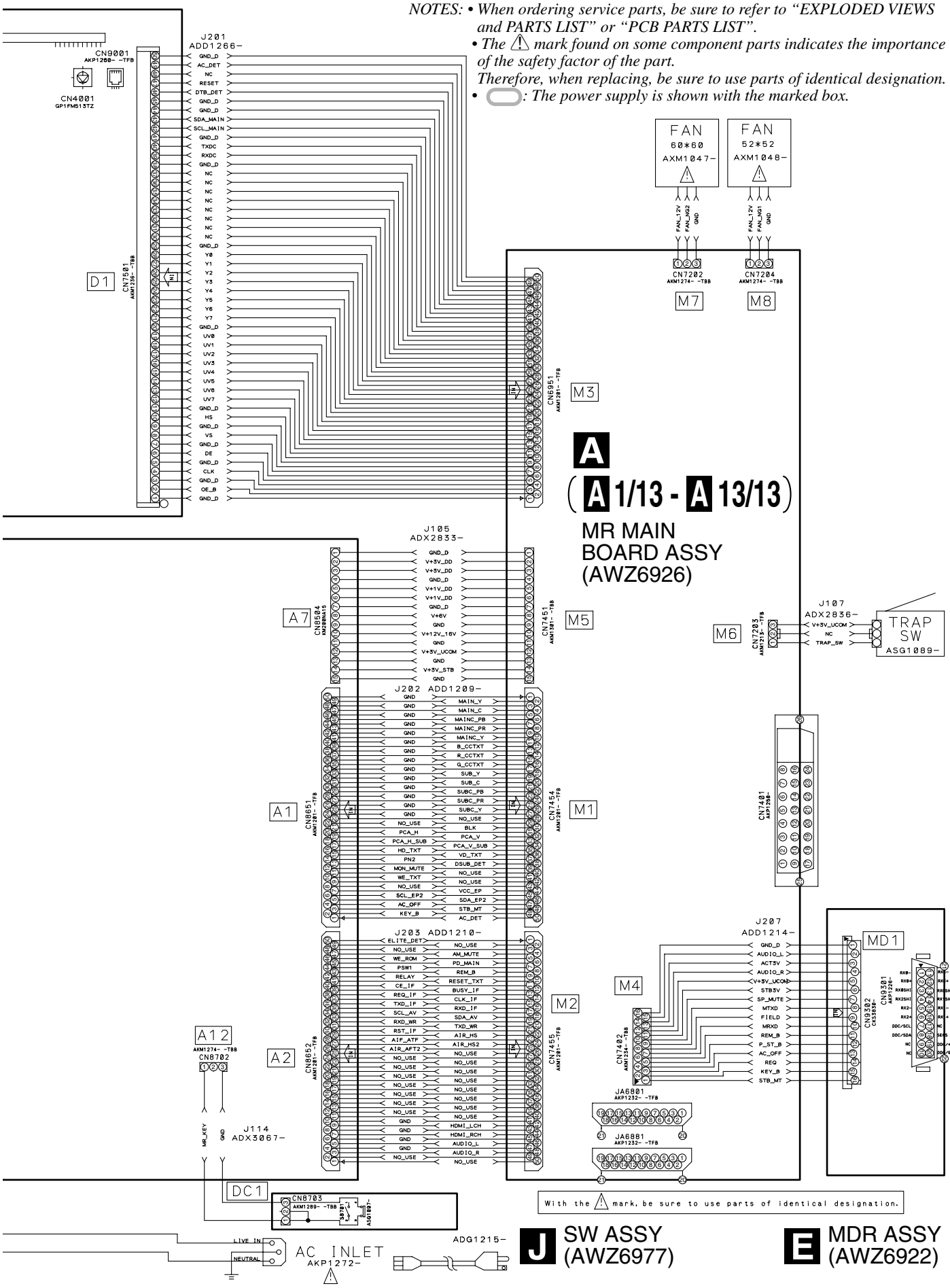
3.2 OVERALL WIRING CONNECTION DIAGRAM



	JA9501	JA9502	JA9504
PDP-R05U/KUC	AWZ6924	AKB1303-	AKP1238-	AKB1305-
PRO-R05U/KUC	AWZ6928	AKB1304-	AKP1239-	AKB1306-

	JA7701	JA7702	JA7703	JA7704	JA7705
PDP-R05U/KUC	AWZ6978	AKB1297-	AKB1313-	AKB1314-	AKB1295-	AKP1234-
PRO-R05U/KUC	AWZ6979	AKB1298-	AKB1302-	AKB1309-	AKB1312-	AKP1235-

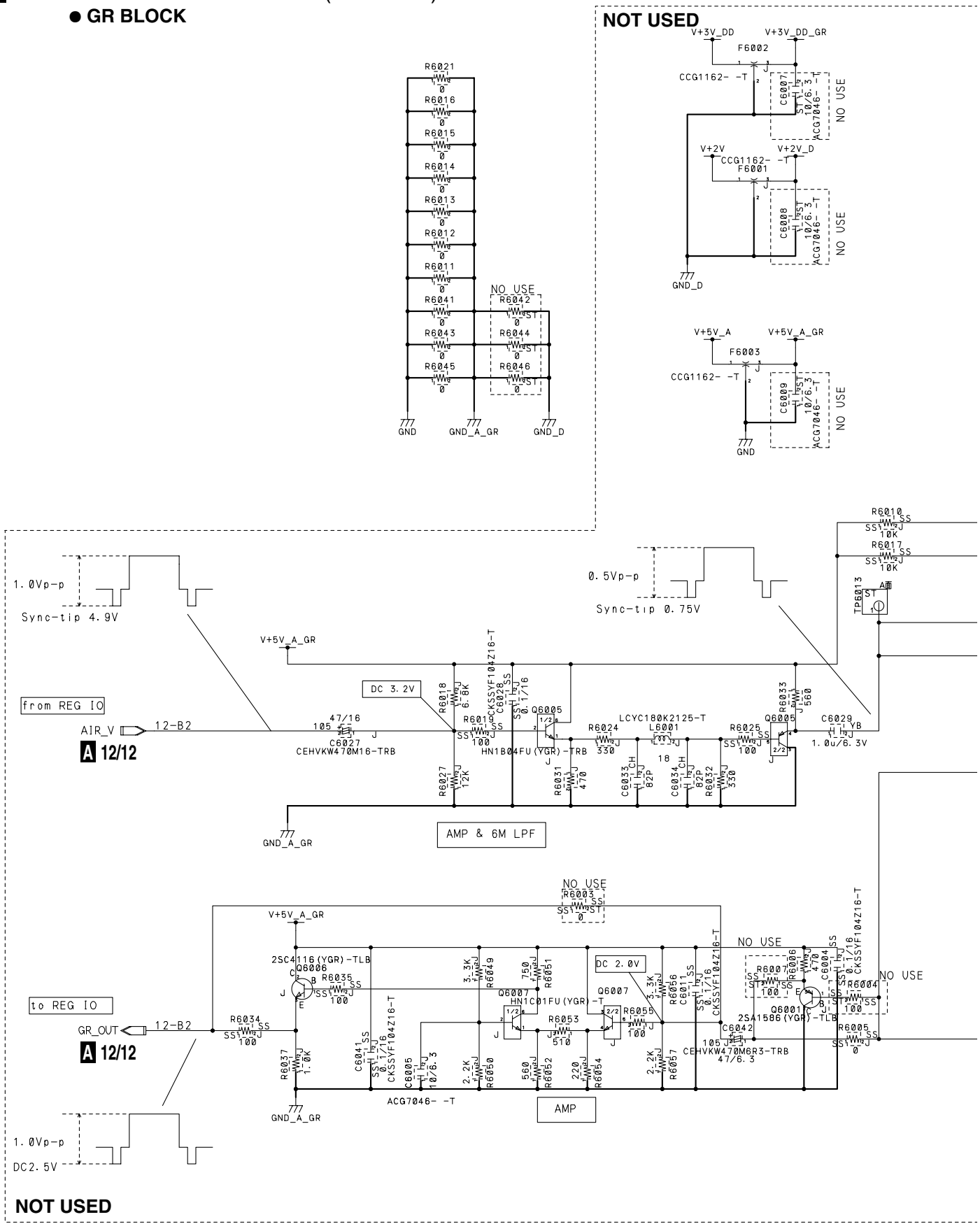
NOTES: • When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
• The ⚠ mark found on some component parts indicates the importance of the safety factor of the part.
Therefore, when replacing, be sure to use parts of identical designation.
• : The power supply is shown with the marked box.



3.3 MR MAIN BOARD ASSY (1/12)

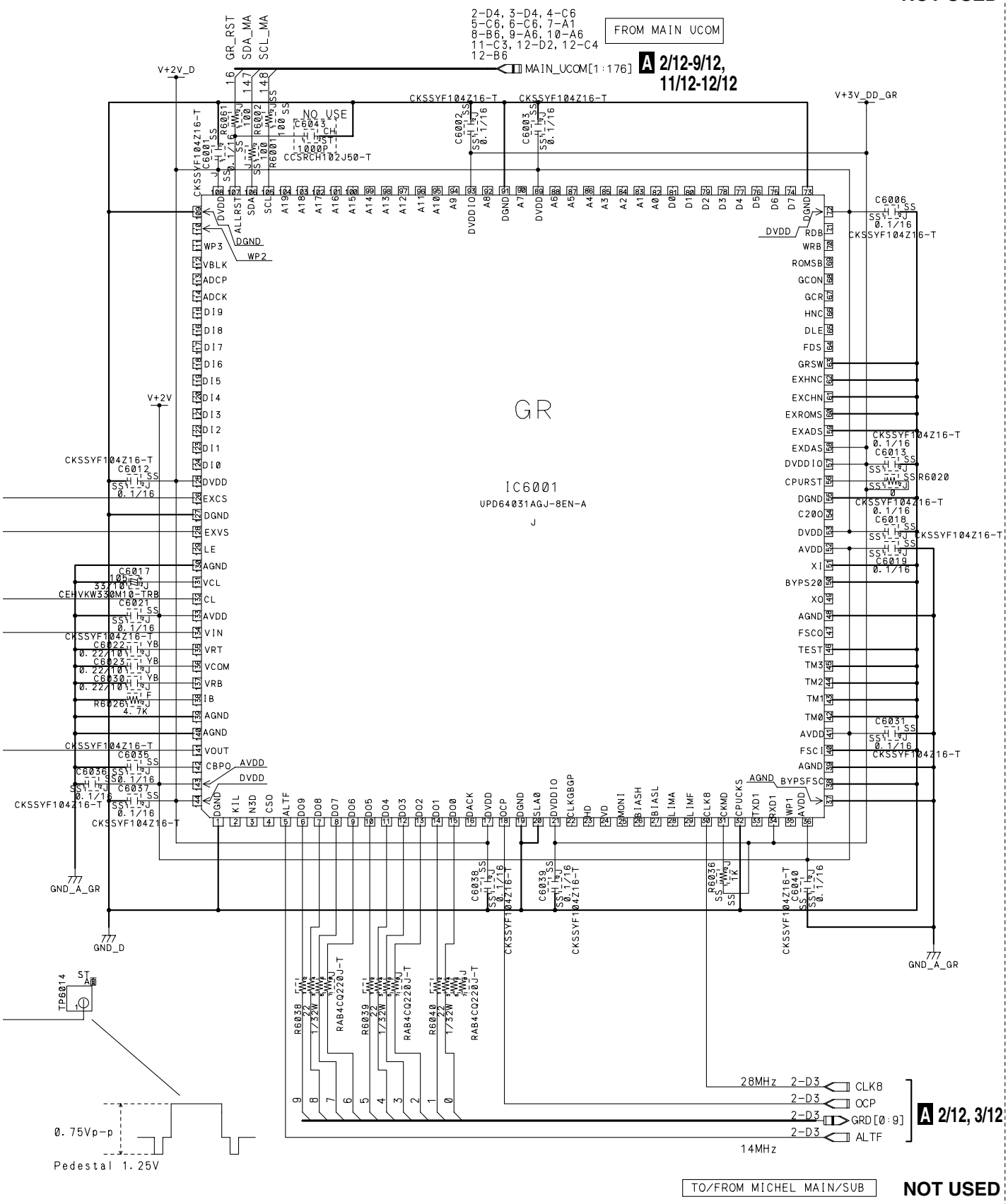
A 1/12 MR MAIN BOARD ASSY (AWZ6926)

● **GR BLOCK**



A 1/12

NOT USED



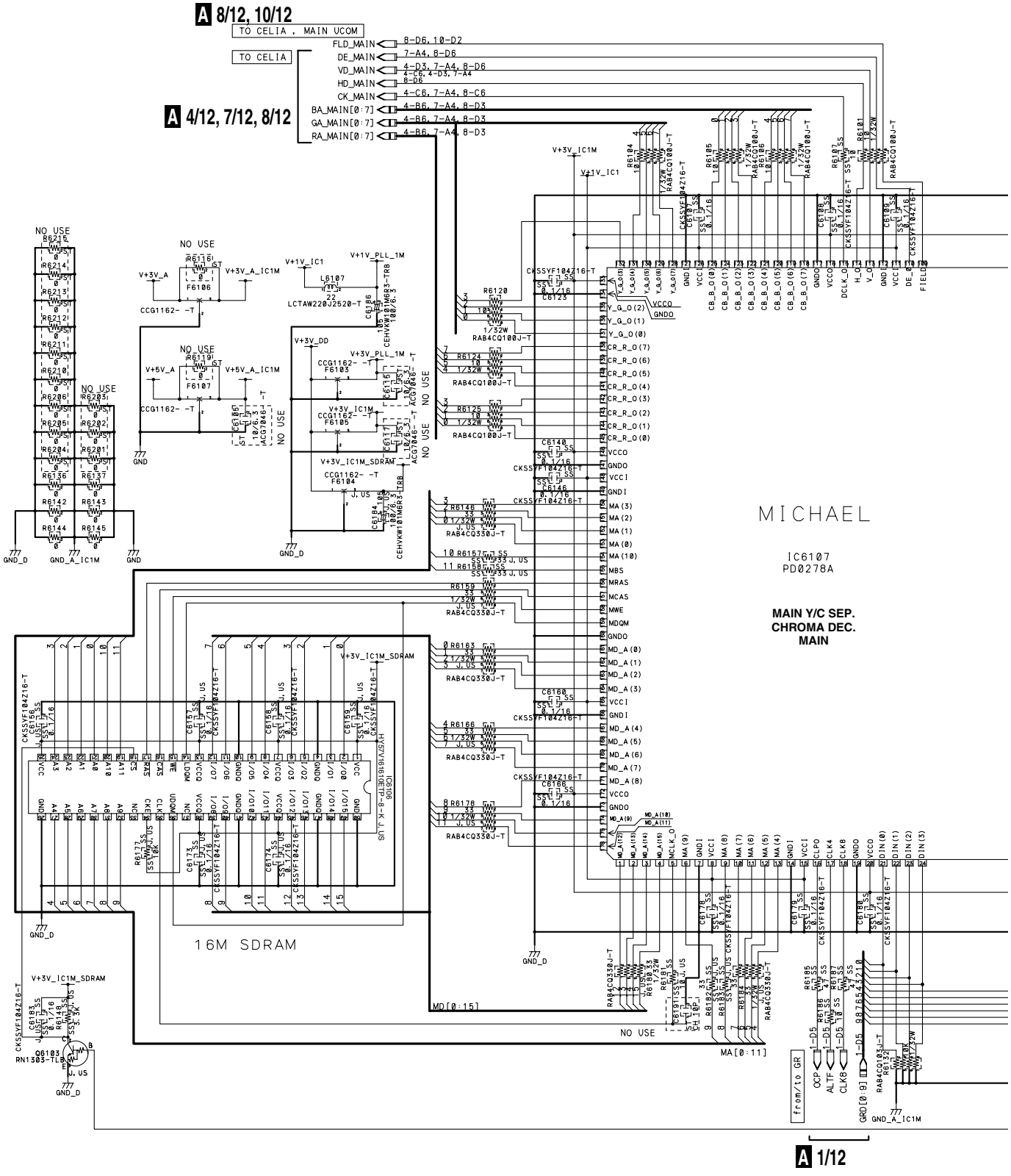
NOT USED

A 1/12

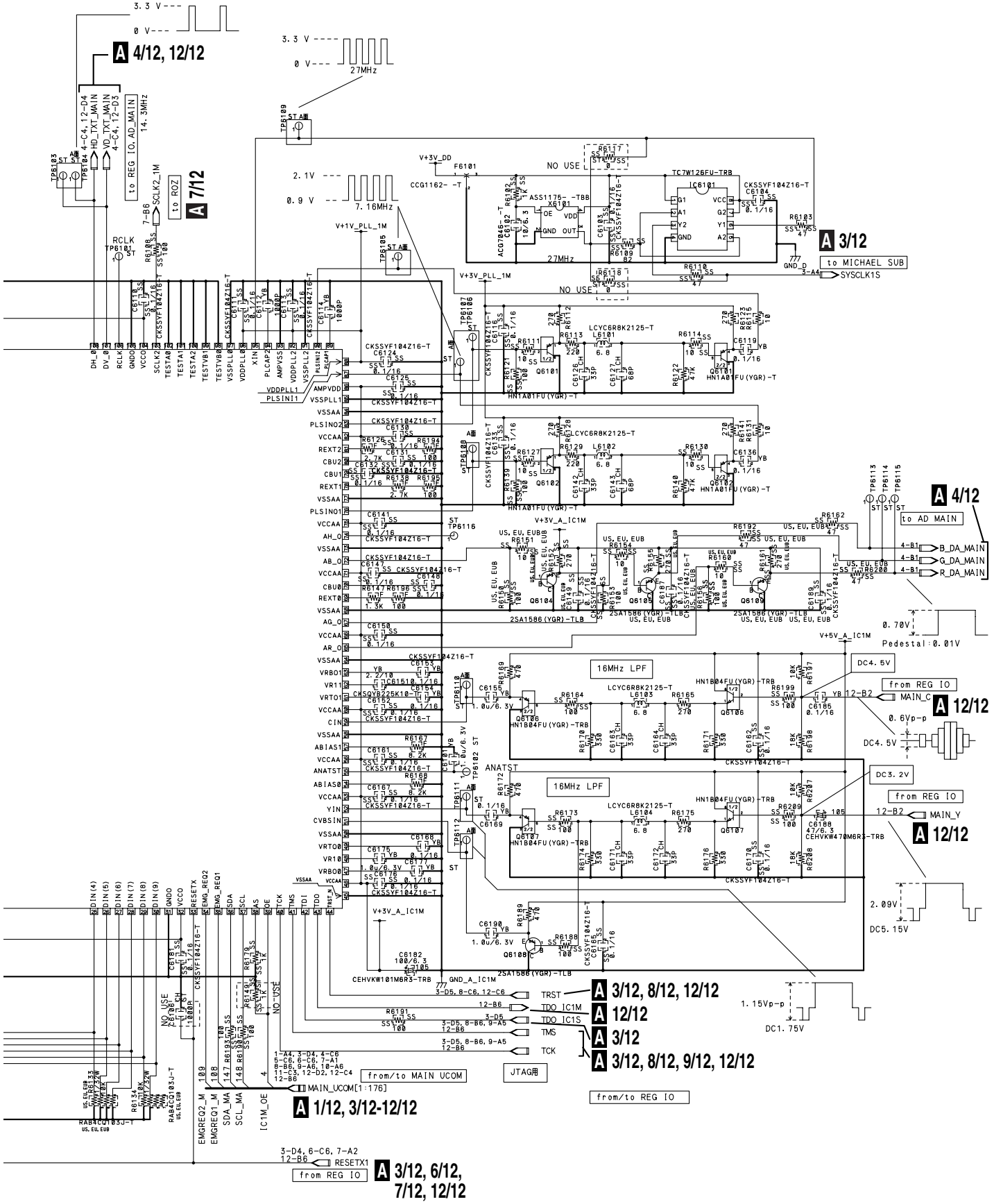
3.4 MR MAIN BOARD ASSY (2/12)

A 2/12 MR MAIN BOARD ASSY (AWZ6926)

● **MICHEL MAIN BLOCK**

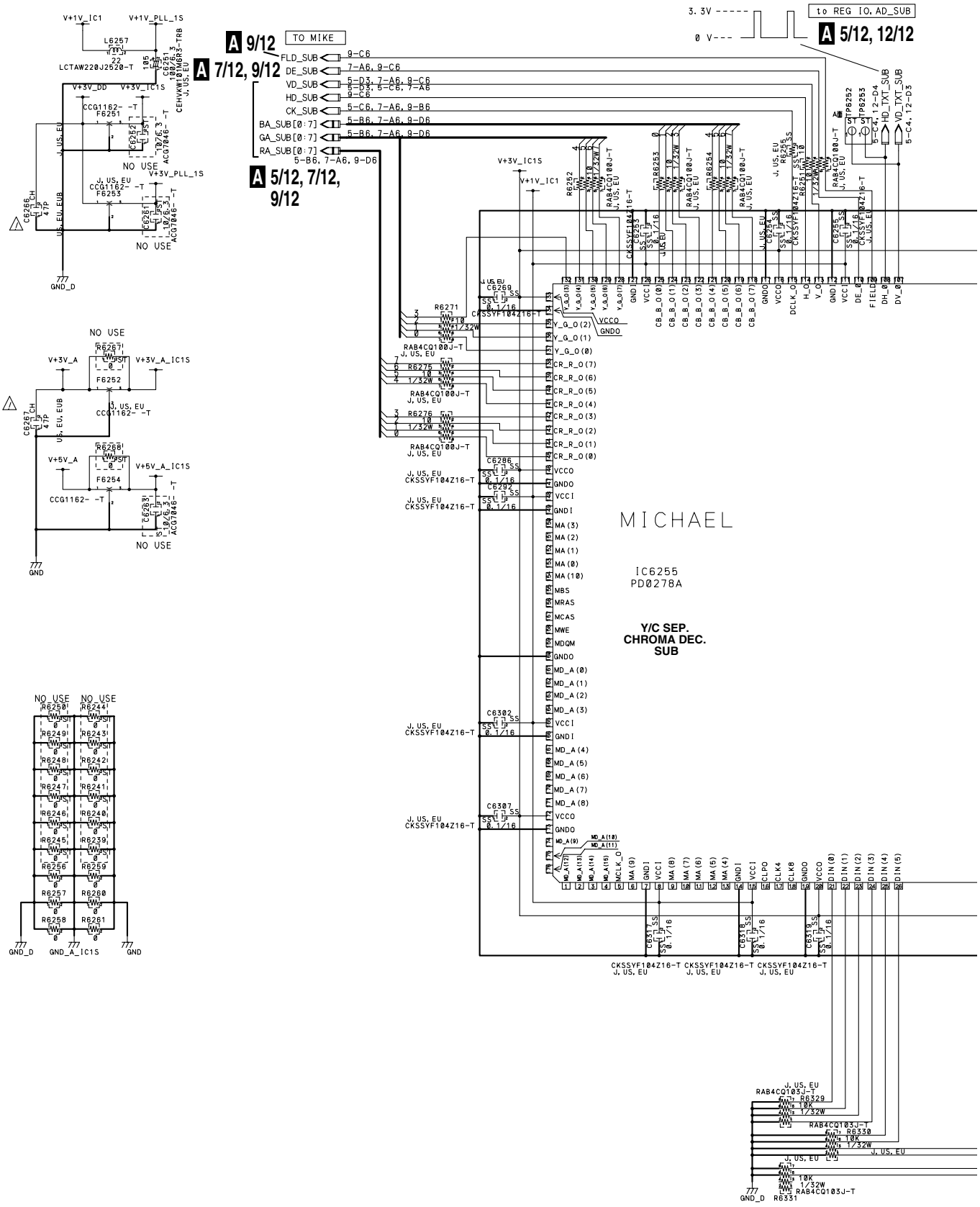


A 2/12

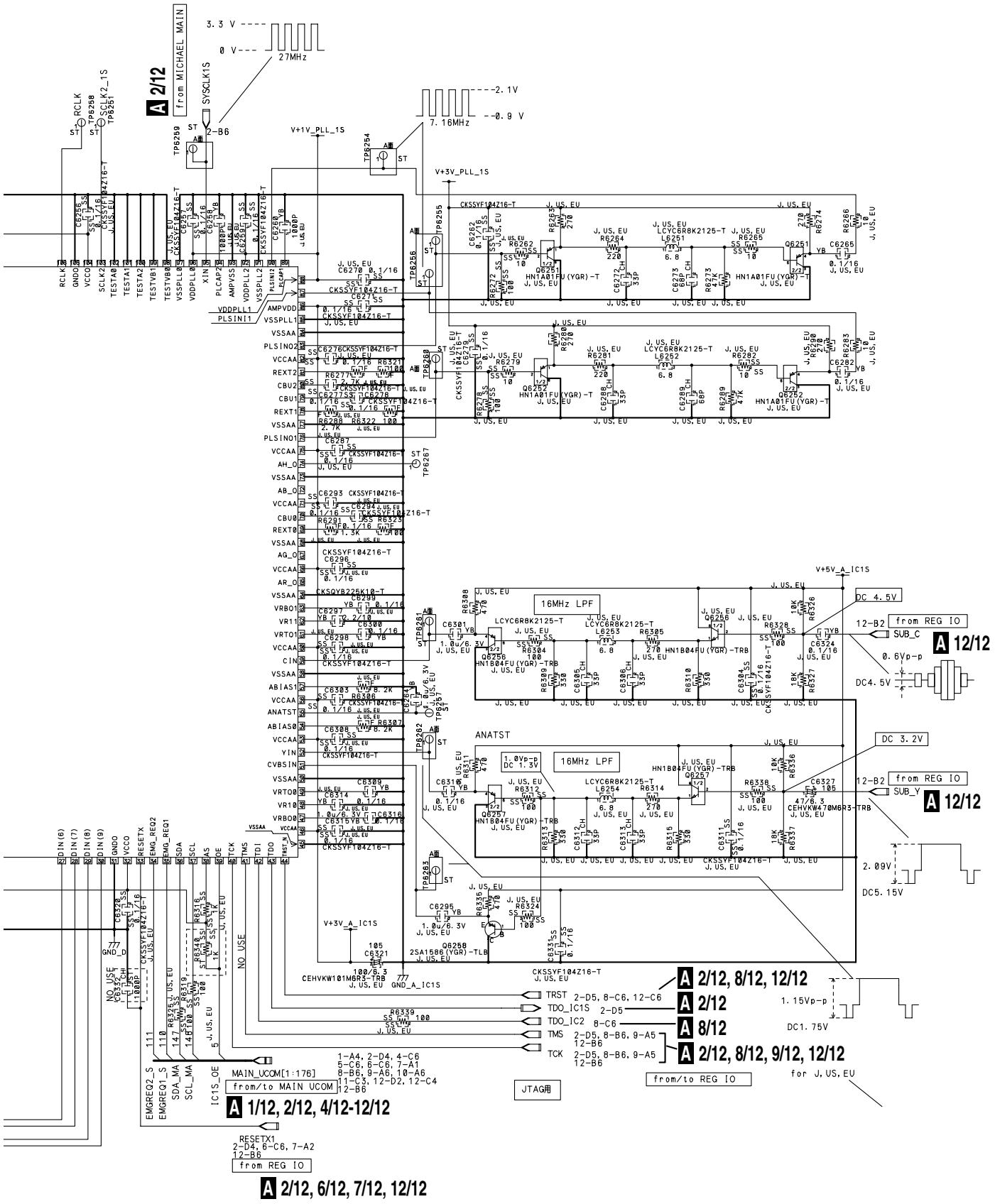

A 4/12, 12/12
to REG IO, AD_MAIN
14.3MHz
to ROZ
A 7/12
27MHz
7.16MHz
NO USE
A 3/12
to MICHAEL SUB
SYSCLK1S
A 4/12
to AD MAIN
B_DA_MAIN
G_DA_MAIN
R_DA_MAIN
0.70V
Pedestal : 0.01V
16MHz LPF
DC4. 5V
from REG IO
MAIN_C
A 12/12
0.6Vp-p
ANATST
DC3. 2V
MAIN_Y
2.09V
DC5. 15V
1. 15Vp-p
DC1. 75V
TRST
TDO_IC1M
TDO_IC1S
TMS
TCK
A 3/12, 8/12, 12/12
A 12/12
A 3/12
A 3/12, 8/12, 9/12, 12/12
JTAG用
from/to REG IO
from/to MAIN UCOM
MAIN_UCOM[1:176]
A 1/12, 3/12-12/12
RESETX1
from REG IO
A 3/12, 6/12, 7/12, 12/12
A 2/12

3.5 MR MAIN BOARD ASSY (3/12)

A 3/12 MR MAIN BOARD ASSY (AWZ6926) ● MICHEL SUB BLOCK



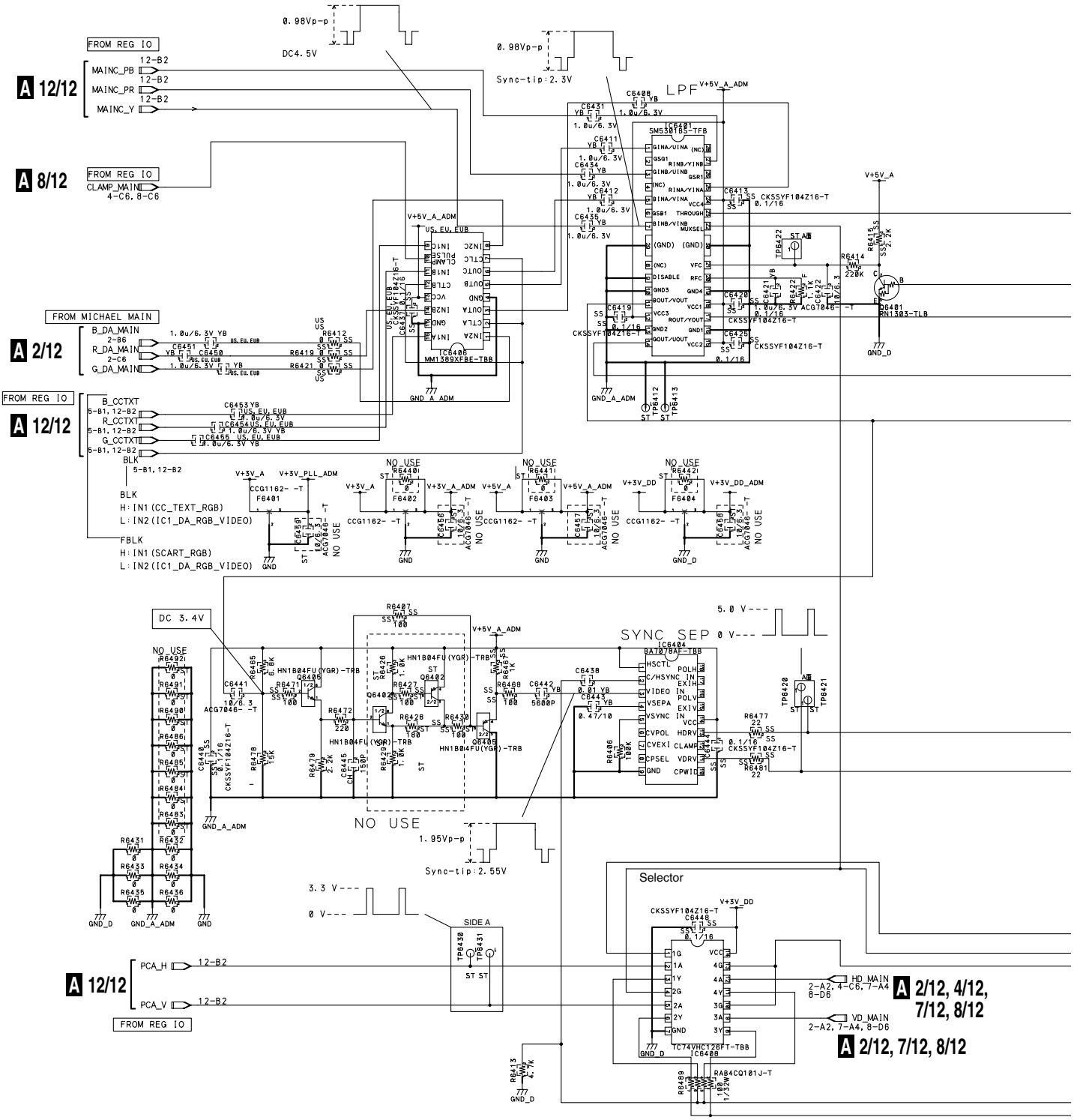
A 3/12

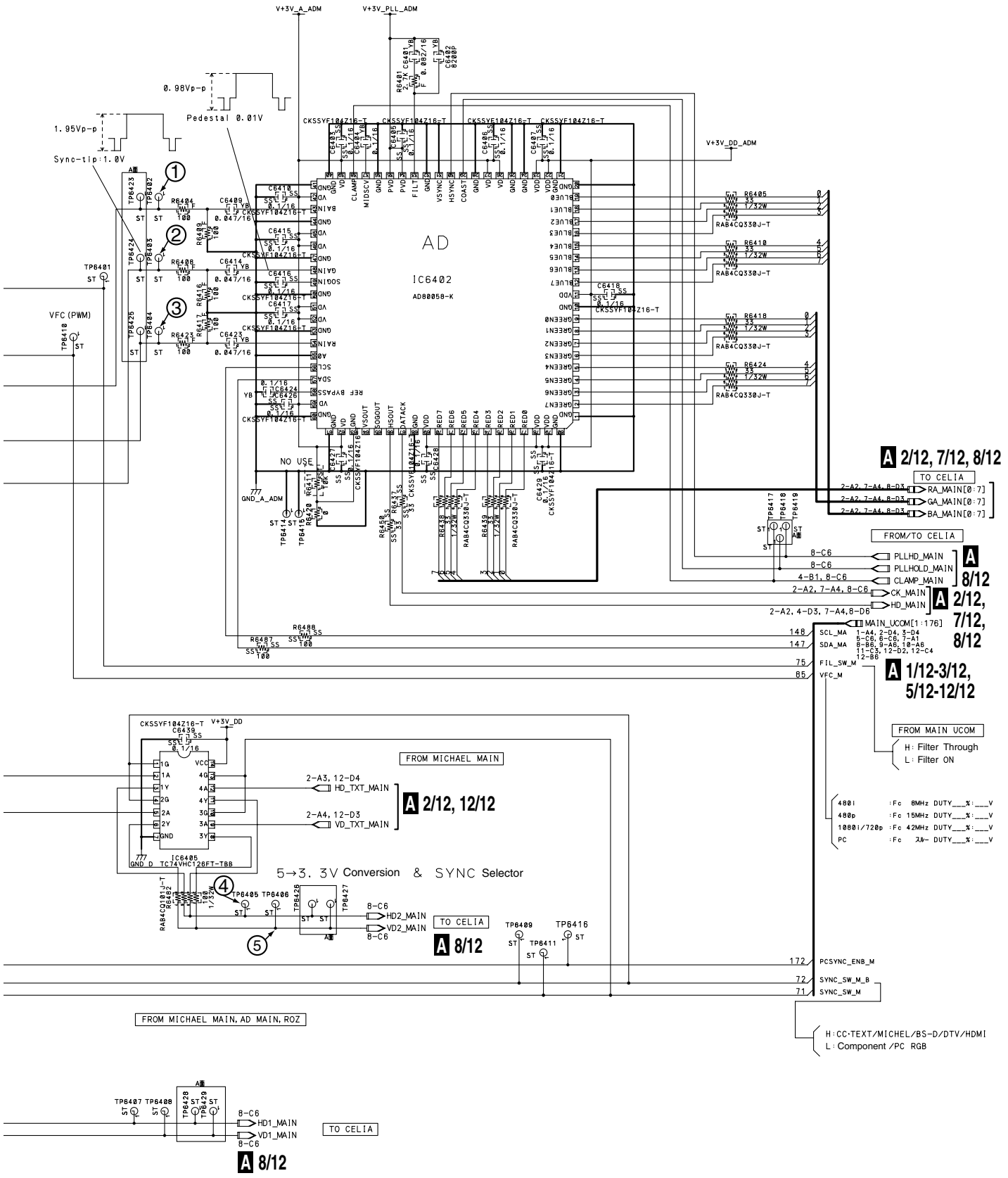

A 2/12
from MICHAEL MAIN
3.3 V
0 V
27MHz
SYSCLK1S
2-B6
-2.1V
-0.9 V
7.16MHz
V+1V_PLL_1S
V+3V_PLL_1S
RCLK
SCLK2_1S
16MHz LPF
ANATST
1.0Vp-p
DC 1.3V
DC 4.5V
DC 3.2V
DC5.15V
DC1.75V
2.09V
0.6Vp-p
1.15Vp-p
12-B2
from REG IO
SUB_C
SUB_Y
A 12/12
V+5V_A_IC1S
V+3V_A_IC1S
GND_A_IC1S
GND_D
NO USE
MAIN_UCOM[1:176]
from/to MAIN UCOM
A 1/12, 2/12, 4/12-12/12
EMGREQ2_S
EMGREQ1_S
SDA_MA
SCL_MA
IC1S_OE
RESETX1
2-D4, 6-C6, 7-A2
12-B6
from REG IO
A 2/12, 6/12, 7/12, 12/12
TRST
TDO_IC1S
TDO_IC2
TMS
TCK
2-D5, 8-C6, 12-C6
A 2/12, 8/12, 12/12
2-D5
A 2/12
8-C6
A 8/12
2-D5, 8-B6, 9-A5
12-B6
A 2/12, 8/12, 9/12, 12/12
2-D5, 8-B6, 9-A5
12-B6
from/to REG IO
for J, US, EU
JTAG用
1-A4, 2-D4, 4-C6
5-C6, 6-C6, 7-A1
8-B6, 9-A6, 10-A6
11-C3, 12-D2, 12-C4
12-B6
A 3/12

3.6 MR MAIN BOARD ASSY (4/12)

A 4/12 MR MAIN BOARD ASSY (AWZ6926)

● **AD MAIN BLOCK**

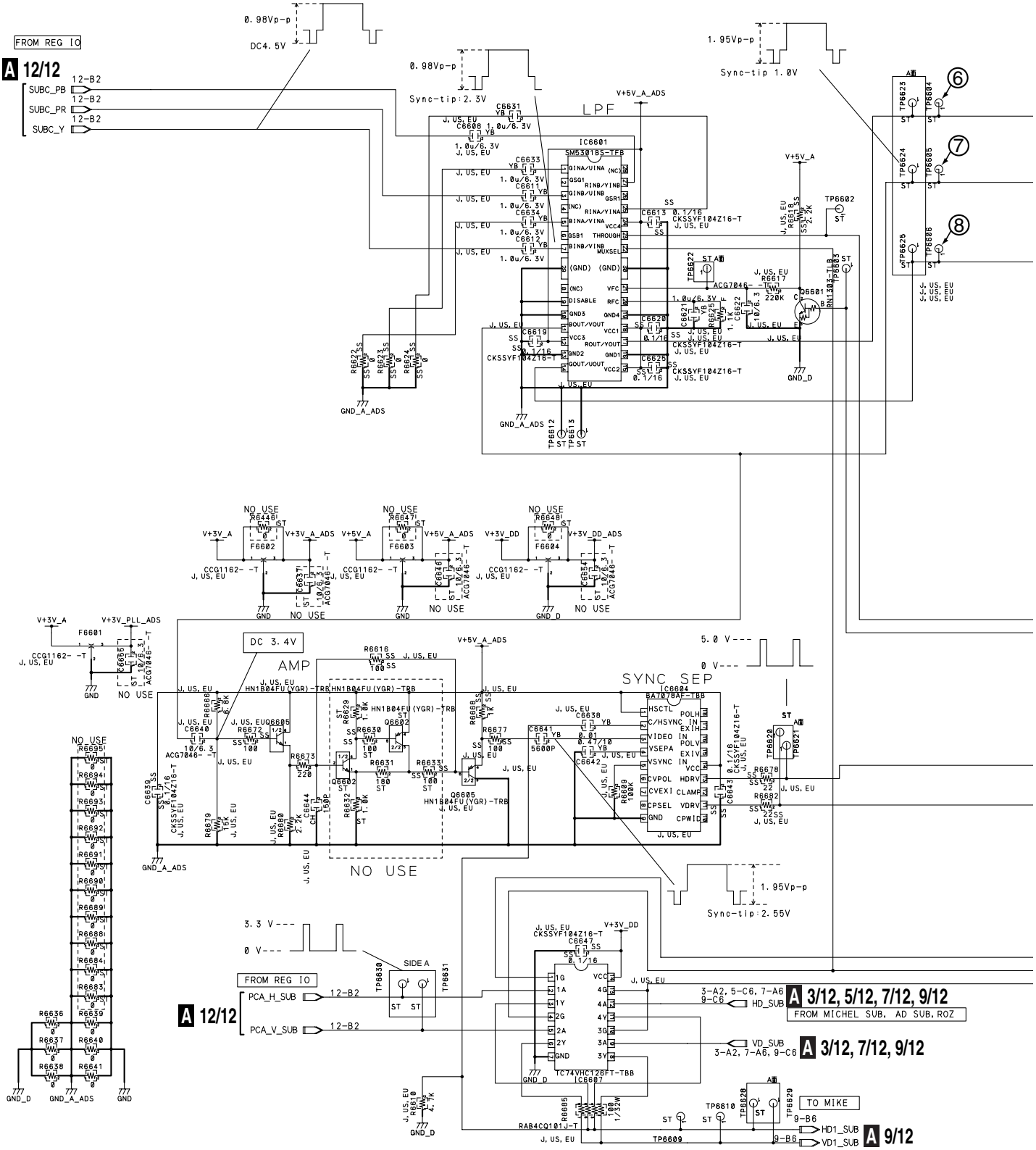



V+3V_A_ADM
V+3V_PLL_ADM
V+3V_DD_ADM
0.98Vp-p
Pedestal 0.01V
1.95Vp-p
Sync-tip:1.0V
VFC (PWM)
AD
IC6402
AD8005B-K
NO USE
GND_A_ADM
TO CELIA
RA_MAIN[0:7]
GA_MAIN[0:7]
BA_MAIN[0:7]
FROM/TO CELIA
PLLHD_MAIN
PLLHOLD_MAIN
CLAMP_MAIN
CK_MAIN
HD_MAIN
MAIN_UCOM[1:176]
SCL_MA
SDA_MA
FIL_SW_M
VFC_M
A 2/12, 7/12, 8/12
A 8/12
A 2/12, 7/12, 8/12
A 1/12-3/12, 5/12-12/12
FROM MAIN UCOM
H: Filter Through
L: Filter ON
480i :Fc 8MHz DUTY___%:___V
480p :Fc 15MHz DUTY___%:___V
1080i/720p :Fc 42MHz DUTY___%:___V
PC :Fc ※- DUTY___%:___V
FROM MICHAEL MAIN
HD_TXT_MAIN
VD_TXT_MAIN
A 2/12, 12/12
IC6405
GND D TC74VHC126FT-TBB
5→3.3V Conversion & SYNC Selector
HD2_MAIN
VD2_MAIN
TO CELIA
A 8/12
PCSYNC_ENB_M
SYNC_SW_M_B
SYNC_SW_M
H:CC·TEXT/MICHEL/BS-D/DTV/HDMI
L:Component /PC RGB
FROM MICHAEL MAIN, AD MAIN, ROZ
HD1_MAIN
VD1_MAIN
TO CELIA
A 8/12
A 4/12

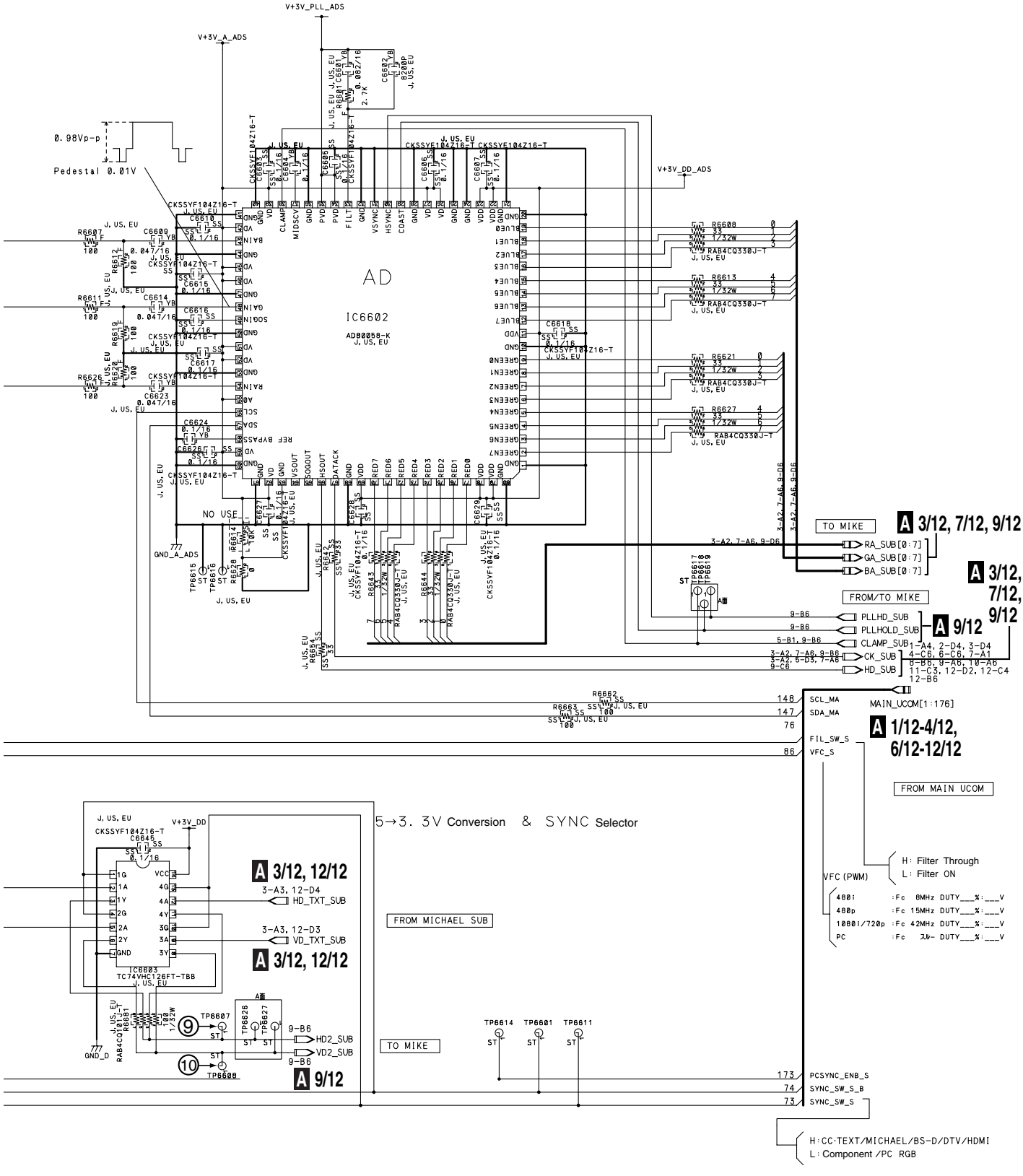
3.7 MR MAIN BOARD ASSY (5/12)

A 5/12 MR MAIN BOARD ASSY (AWZ6926)

● **AD SUB BLOCK**



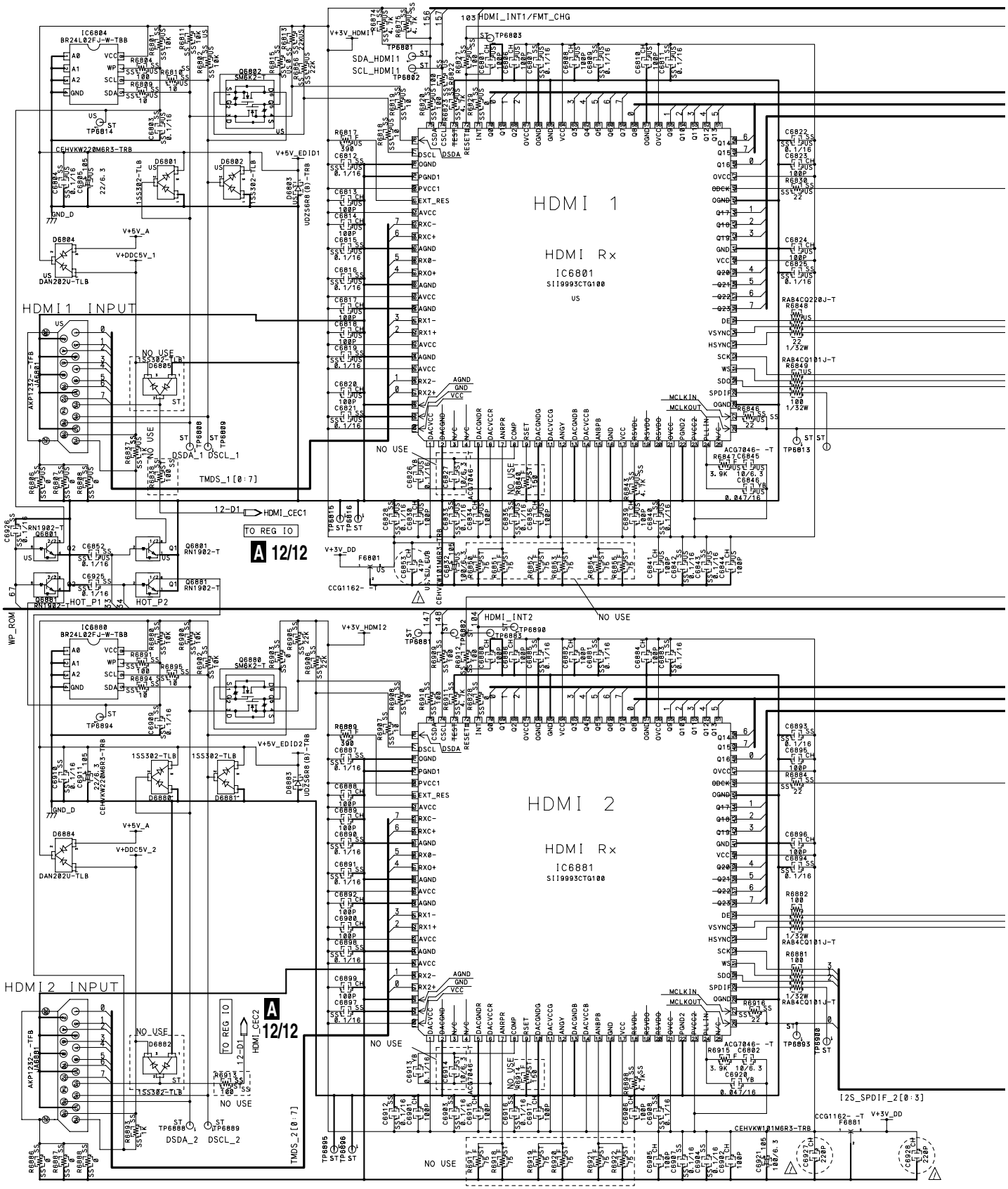
A 5/12


AD
IC6602
AD80058-K
NO USE
5→3. 3V Conversion & SYNC Selector
IC6603
TC74VHC126FT-TBB
FROM MICHAEL SUB
TO MIKE
FROM/TO MIKE
FROM MAIN UCOM
MAIN_UCOM[1:176]
RA_SUB[0:7]
GA_SUB[0:7]
BA_SUB[0:7]
PLLHD_SUB
PLLHOLD_SUB
CLAMP_SUB
CK_SUB
HD_SUB
HD_TXT_SUB
VD_TXT_SUB
HD2_SUB
VD2_SUB
SCL_MA
SDA_MA
FIL_SW_S
VFC_S
PCSYNC_ENB_S
SYNC_SW_S_B
SYNC_SW_S
VFC (PWM)
H: Filter Through
L: Filter ON
H:CC·TEXT/MICHAEL/BS-D/DTV/HDMI
L:Component /PC RGB
A 3/12, 7/12, 9/12
A 9/12
A 1/12-4/12, 6/12-12/12
A 3/12, 12/12
A 5/12

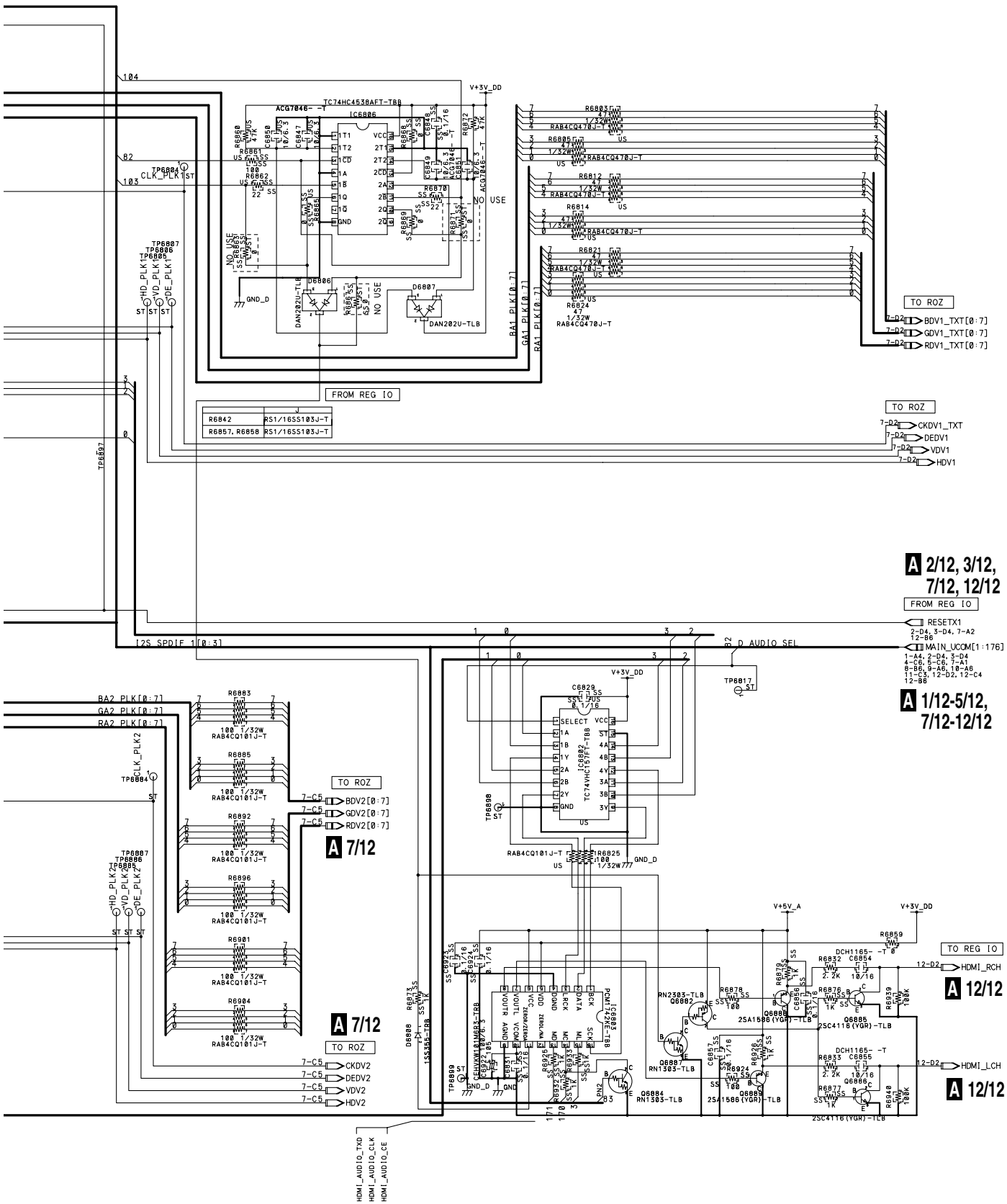
3.8 MR MAIN BOARD ASSY (6/12)

A 6/12 MR MAIN BOARD ASSY (AWZ6926)

● **HDMI RX BLOCK**



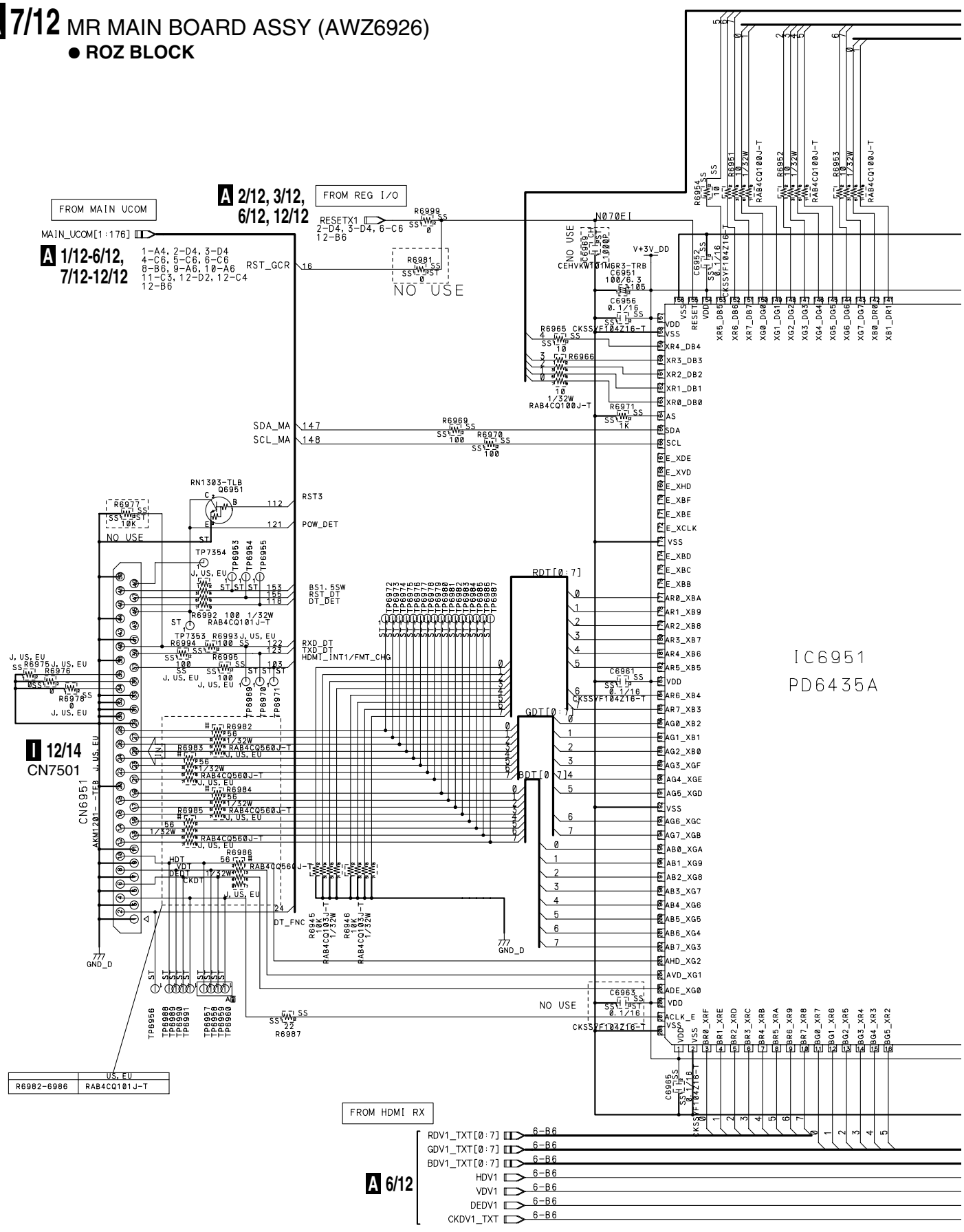
A 6/12


TO ROZ
FROM REG IO
TO REG IO
A 2/12, 3/12, 7/12, 12/12
A 1/12-5/12, 7/12-12/12
A 7/12
A 12/12
A 6/12
HDMI_AUDIO_TXD
HDMI_AUDIO_CLK
HDMI_AUDIO_CE

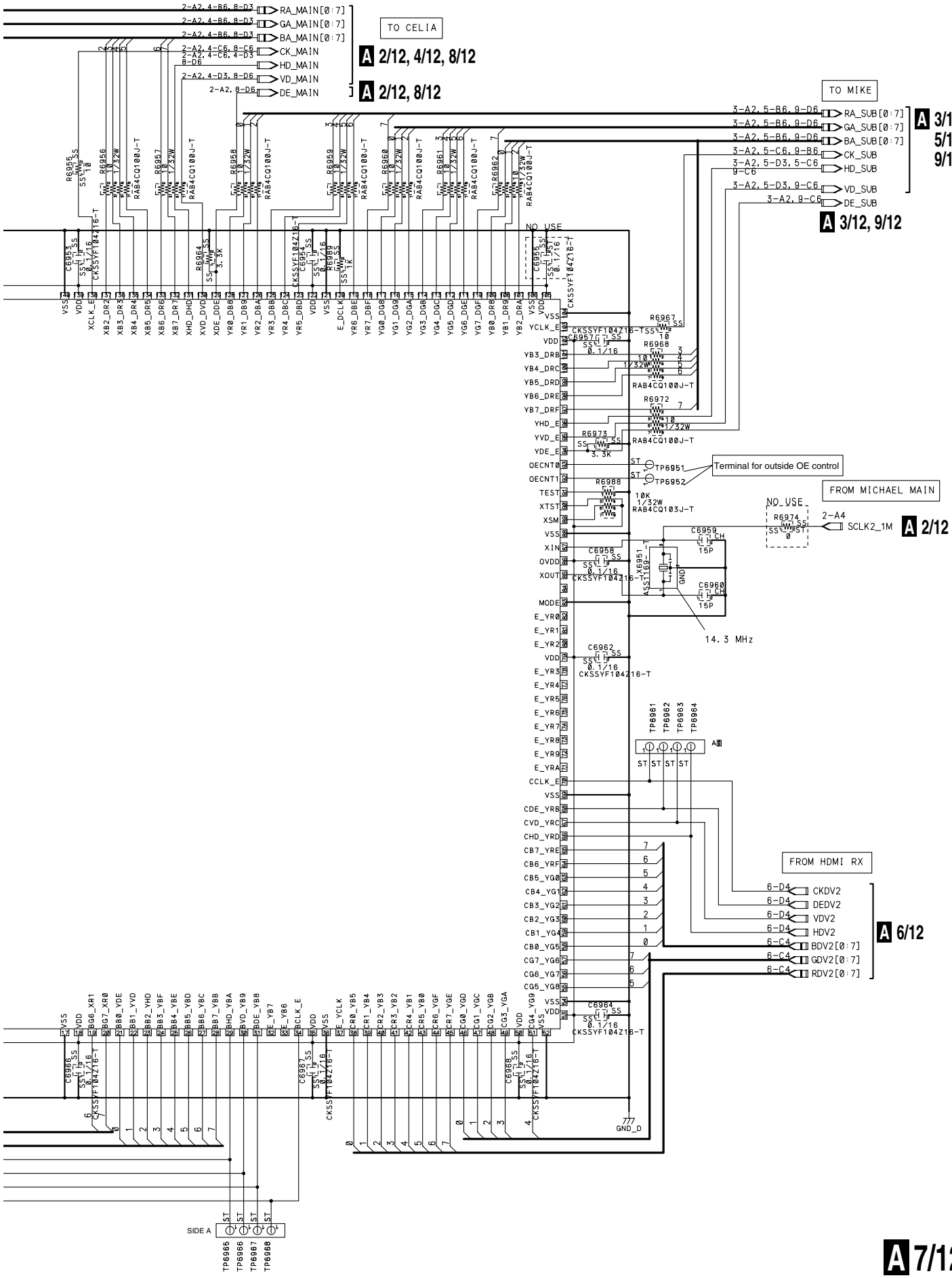
3.9 MR MAIN BOARD ASSY (7/12)

A 7/12 MR MAIN BOARD ASSY (AWZ6926)

● **ROZ BLOCK**



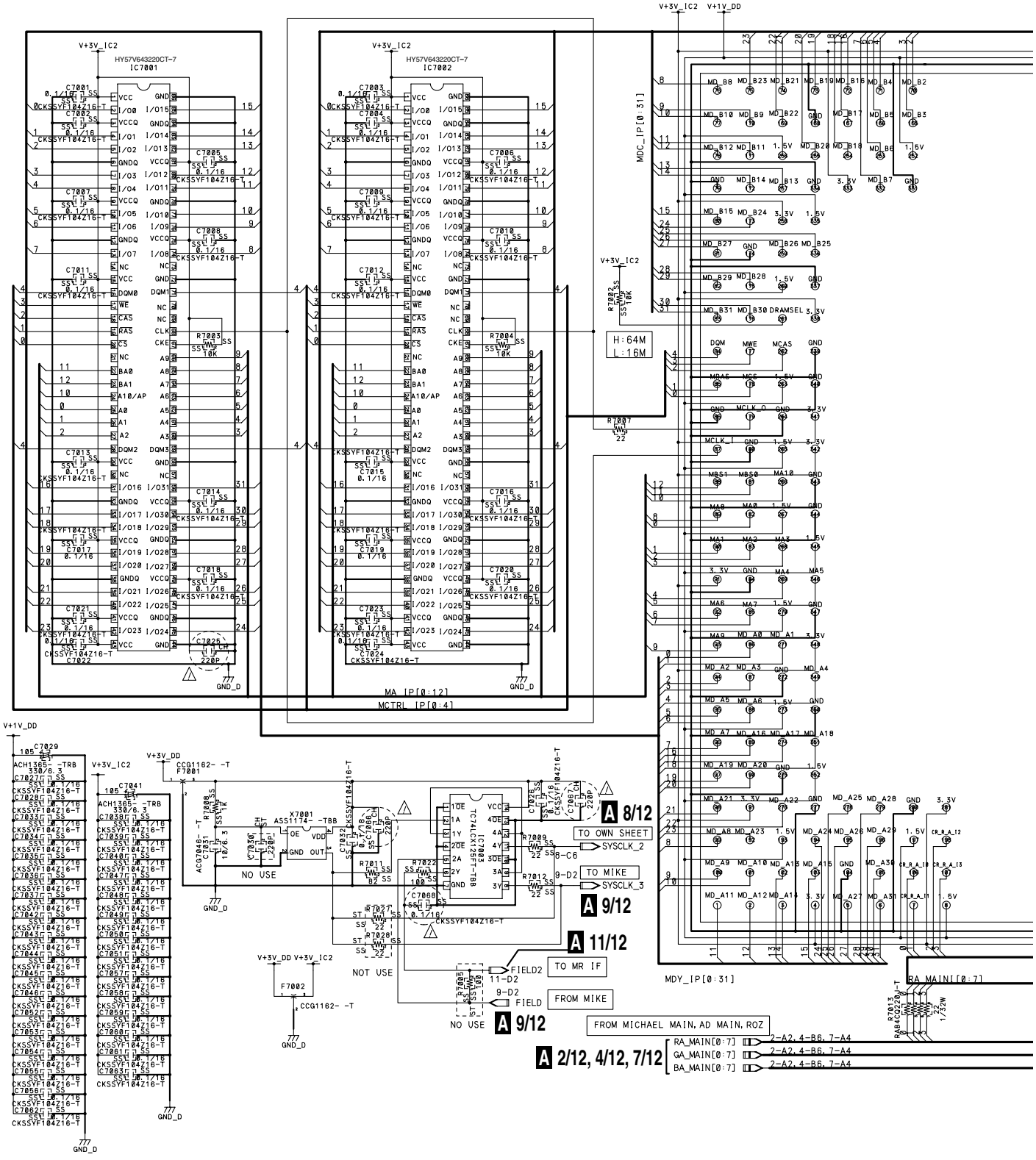
A 7/12


TO CELIA
A 2/12, 4/12, 8/12
A 2/12, 8/12
RA_MAIN[0:7]
GA_MAIN[0:7]
BA_MAIN[0:7]
CK_MAIN
HD_MAIN
VD_MAIN
DE_MAIN
TO MIKE
A 3/12, 5/12, 9/12
A 3/12, 9/12
RA_SUB[0:7]
GA_SUB[0:7]
BA_SUB[0:7]
CK_SUB
HD_SUB
VD_SUB
DE_SUB
NO USE
Terminal for outside OE control
FROM MICHAEL MAIN
A 2/12
SCLK2_1M
14.3 MHz
FROM HDMI RX
A 6/12
CKDV2
DEDV2
VDV2
HDV2
BDV2[0:7]
GDV2[0:7]
RDV2[0:7]
SIDE A
GND_D
A 7/12

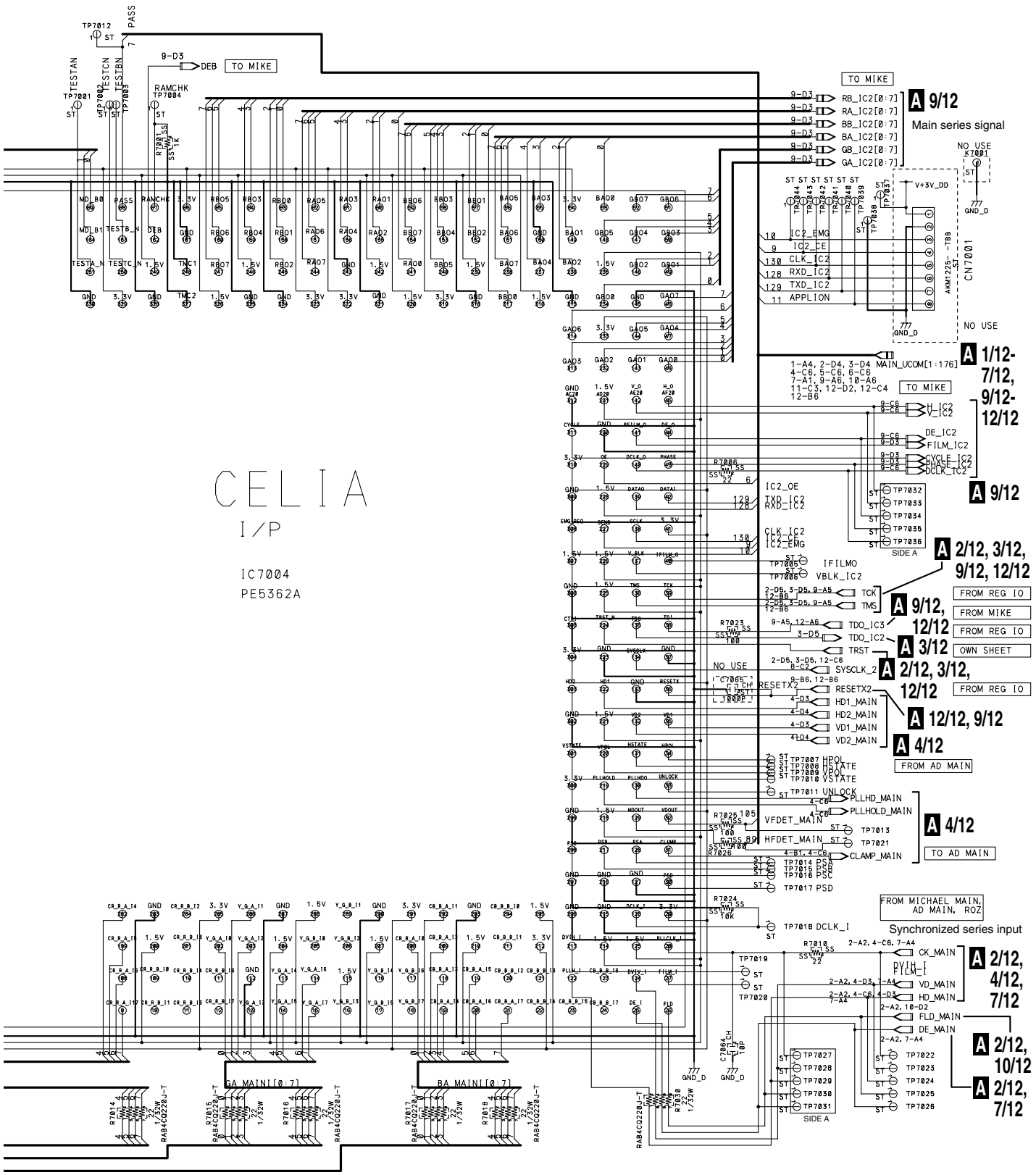
3.10 MR MAIN BOARD ASSY (8/12)

A 8/12 MR MAIN BOARD ASSY (AWZ6926)

● **CELIA BLOCK**



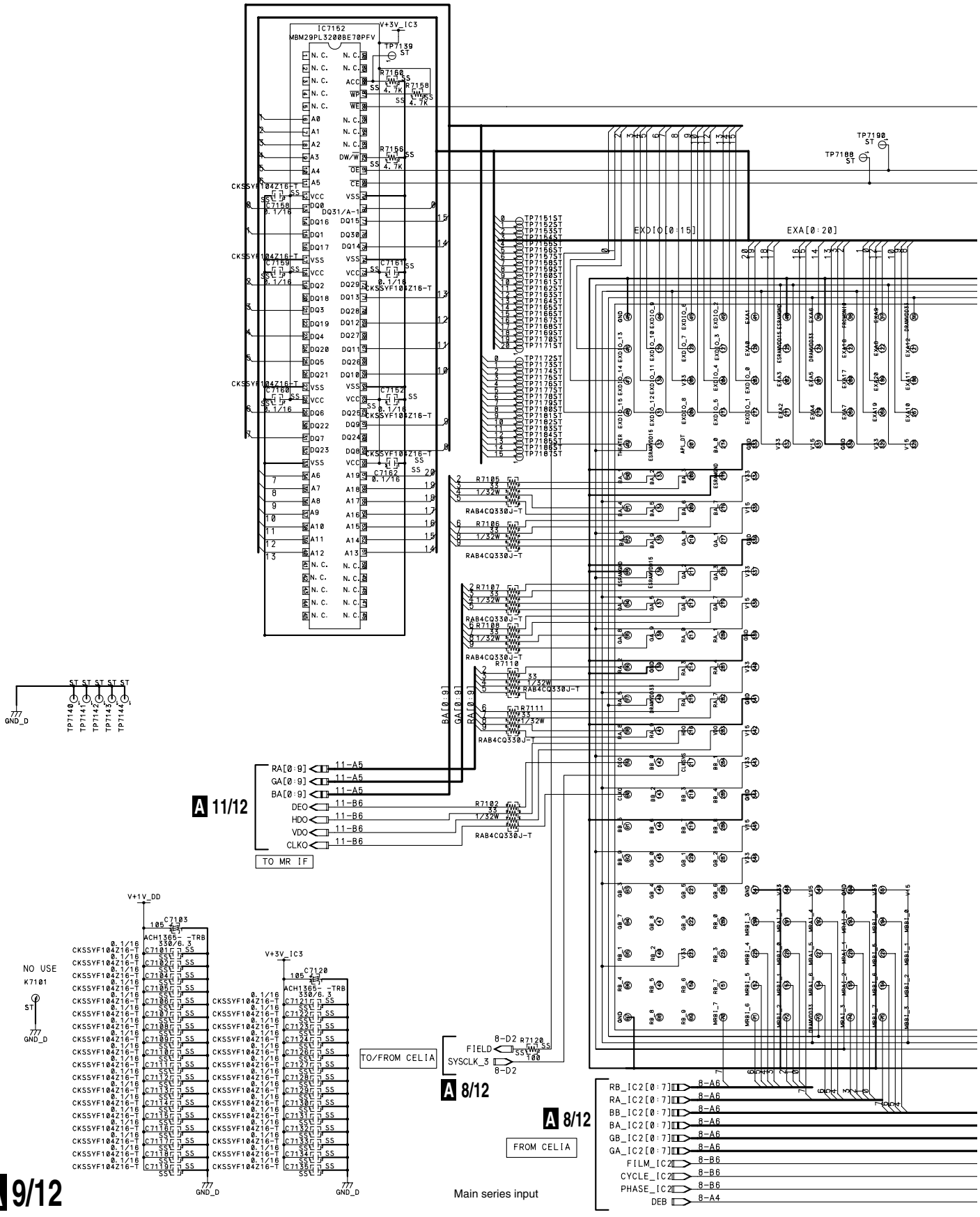
A 8/12

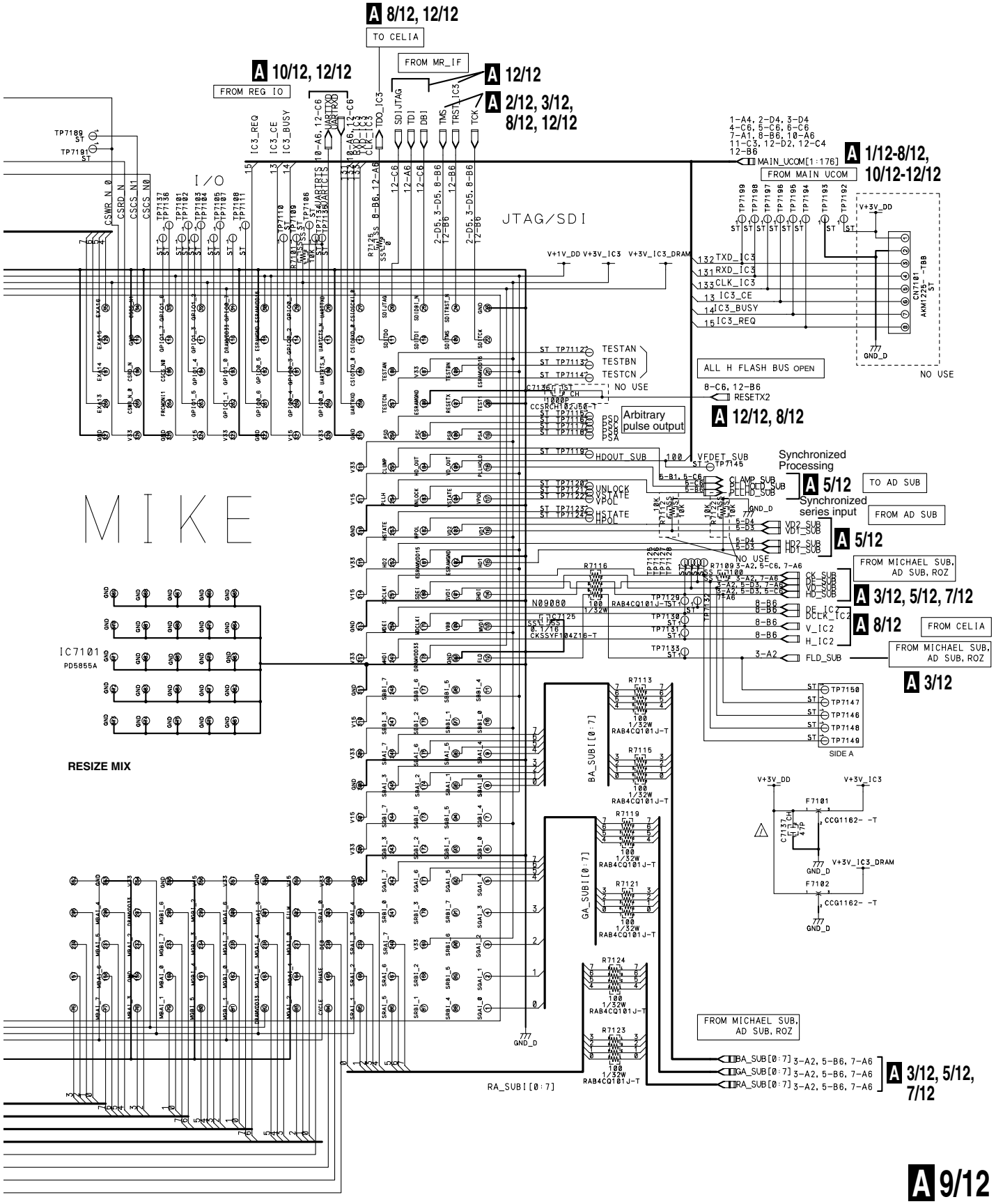

CELIA
I/P
IC7004
PE5362A
TO MIKE
A 9/12
Main series signal
A 1/12-7/12, 9/12-12/12
A 9/12
A 2/12, 3/12, 9/12, 12/12
FROM REG IO
FROM MIKE
FROM REG IO
OWN SHEET
A 9/12, 12/12
A 3/12
A 2/12, 3/12, 12/12
FROM REG IO
A 12/12, 9/12
A 4/12
FROM AD MAIN
A 4/12
TO AD MAIN
FROM MICHAEL MAIN, AD MAIN, ROZ
Synchronized series input
A 2/12, 4/12, 7/12
A 2/12, 10/12
A 2/12, 7/12
A 8/12
SIDE A
SIDE A
NO USE
NO USE
GA_MAIN[0:7]
BA_MAIN[0:7]

3.11 MR MAIN BOARD ASSY (9/12)

A 9/12 MR MAIN BOARD ASSY (AWZ6926)

● **MIKE BLOCK**

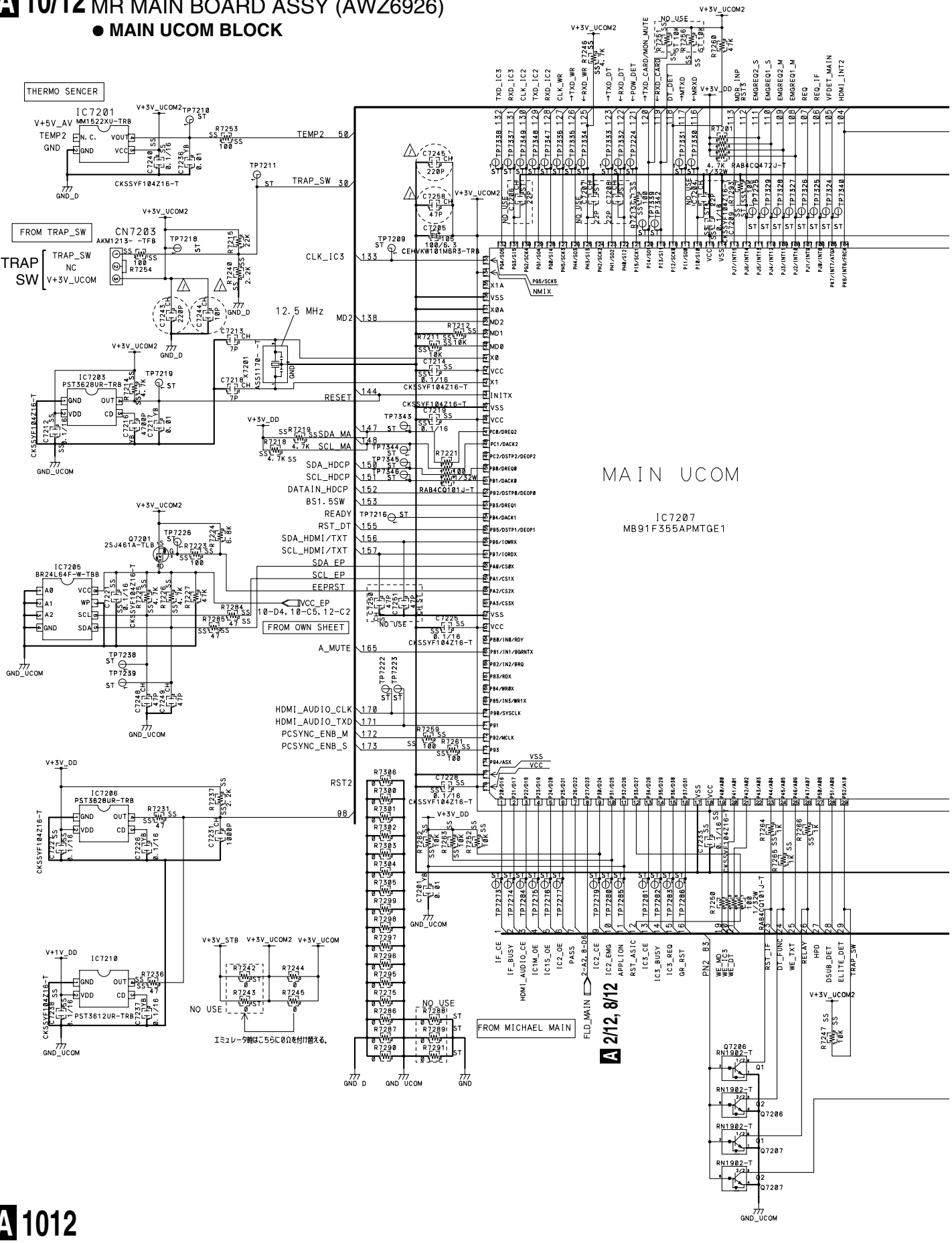



A 8/12, 12/12
TO CELIA
FROM MR_IF
A 12/12
A 10/12, 12/12
FROM REG IO
A 2/12, 3/12, 8/12, 12/12
I/O
JTAG/SDI
MAIN_UCOM[1:176]
FROM MAIN UCOM
A 1/12-8/12, 10/12-12/12
ALL H FLASH BUS OPEN
NO USE
A 12/12, 8/12
Arbitrary pulse output
Synchronized Processing
A 5/12
TO AD SUB
Synchronized series input
FROM AD SUB
A 5/12
FROM MICHAEL SUB, AD SUB, ROZ
A 3/12, 5/12, 7/12
A 8/12
FROM CELIA
FROM MICHAEL SUB, AD SUB, ROZ
A 3/12
SIDE A
FROM MICHAEL SUB, AD SUB, ROZ
A 3/12, 5/12, 7/12
A 9/12
MIKE
IC7101
PD5855A
RESIZE MIX
BA_SUB[0:7]
GA_SUB[0:7]
RA_SUB[0:7]

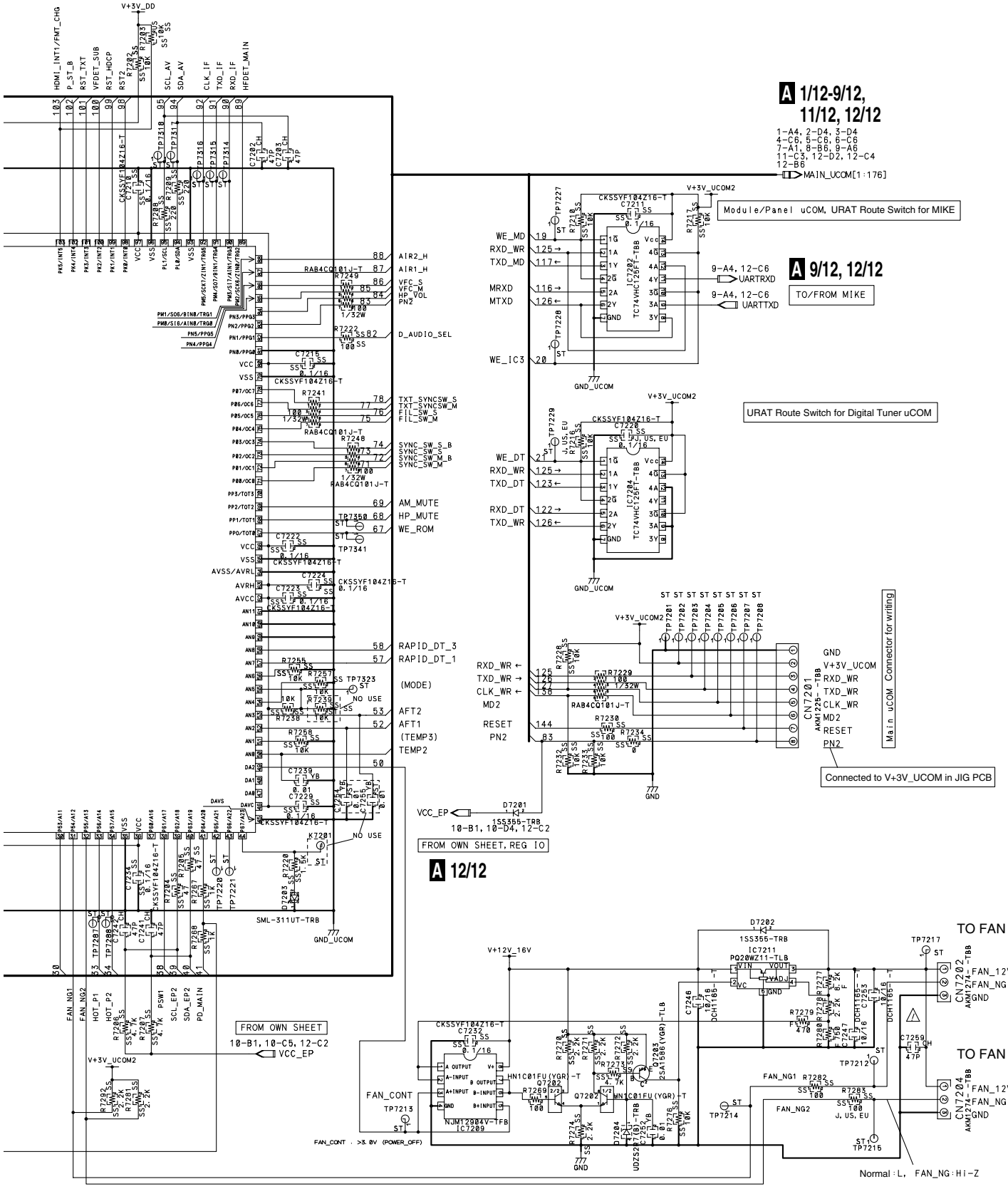
3.12 MR MAIN BOARD ASSY (10/12)

A 10/12 MR MAIN BOARD ASSY (AWZ6926)

● **MAIN UCOM BLOCK**



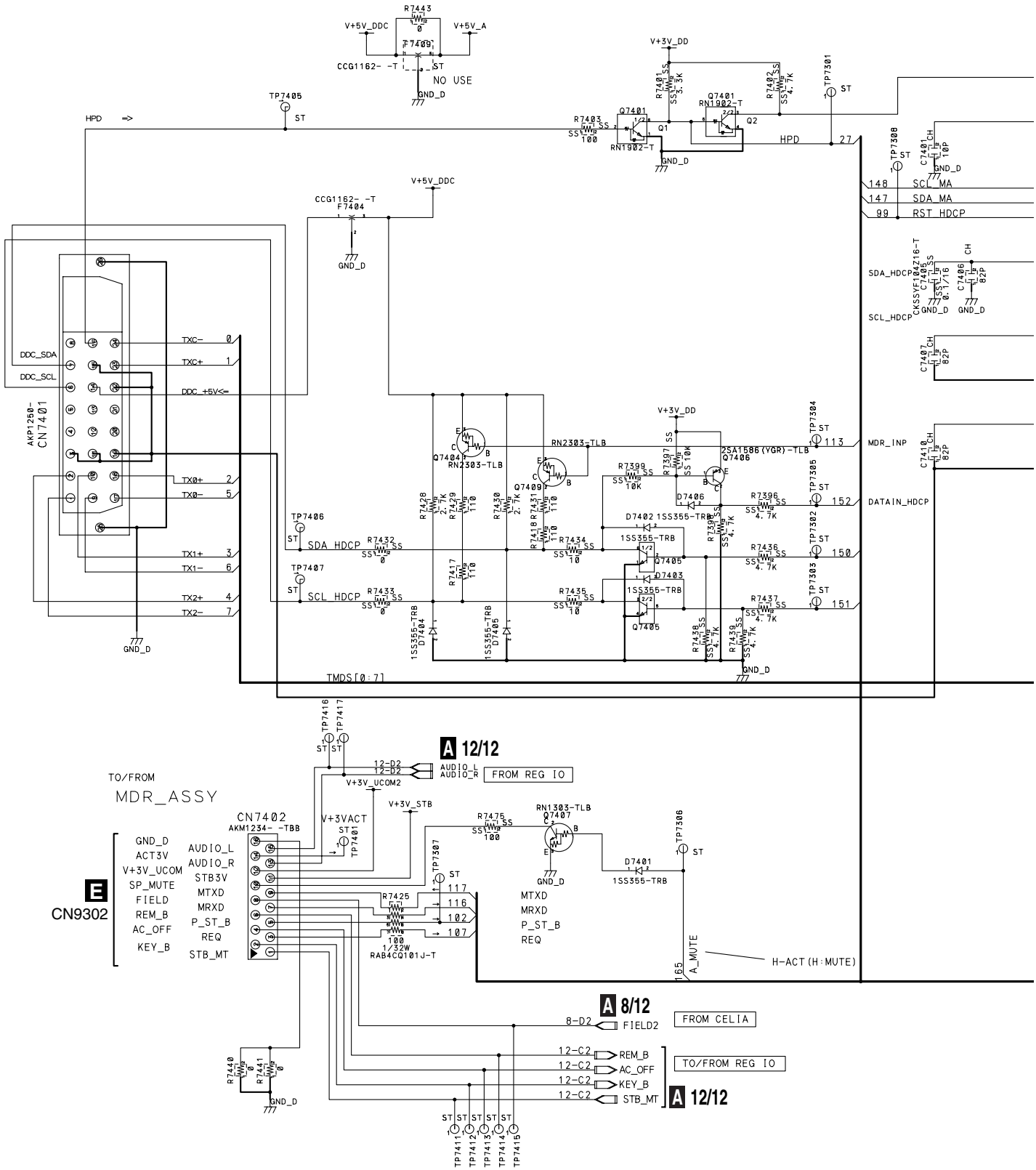
A 1012


A 1/12-9/12, 11/12, 12/12
1-A4, 2-D4, 3-D4
4-C6, 5-C6, 6-C6
7-A1, 8-B6, 9-A6
11-C3, 12-D2, 12-C4
12-B6
MAIN_UCOM[1:176]
Module/Panel uCOM, URAT Route Switch for MIKE
A 9/12, 12/12
TO/FROM MIKE
9-A4, 12-C6 UARTRXD
9-A4, 12-C6 UARTTXD
URAT Route Switch for Digital Tuner uCOM
Main uCOM Connector for writing
Connected to V+3V_UCOM in JIG PCB
FROM OWN SHEET, REG IO
10-B1, 10-D4, 12-C2
A 12/12
FROM OWN SHEET
10-B1, 10-C5, 12-C2
VCC_EP
TO FAN
FAN_12V
FAN_NG
GND
FAN_CONT
FAN_CONT : >3.0V (POWER_OFF)
Normal : L, FAN_NG : Hi-Z
A 10/12

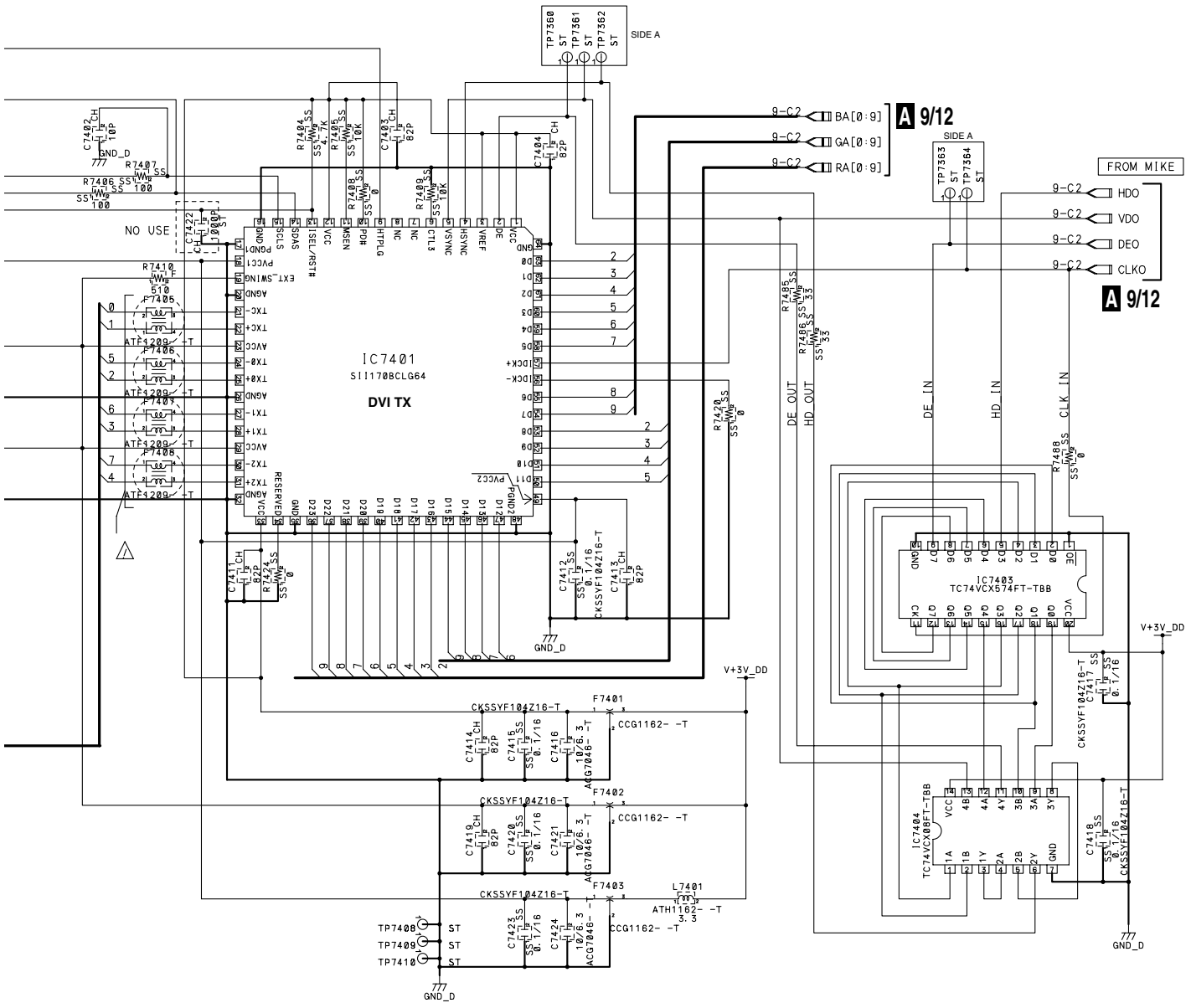
3.13 MR MAIN BOARD ASSY (11/12)

A 11/12 MR MAIN BOARD ASSY (AWZ6926)

● **MR I/F BLOCK**



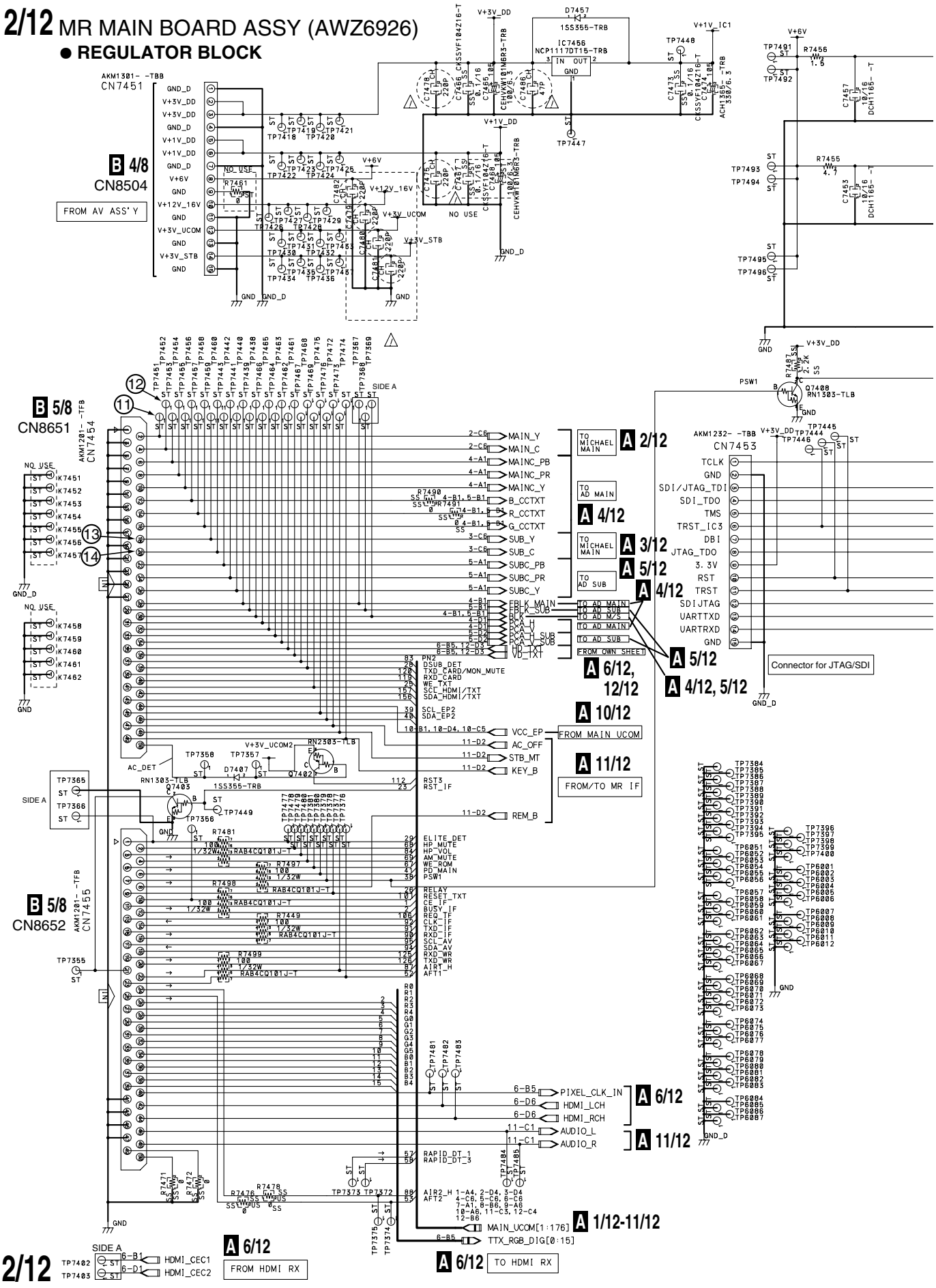
A **11/12**

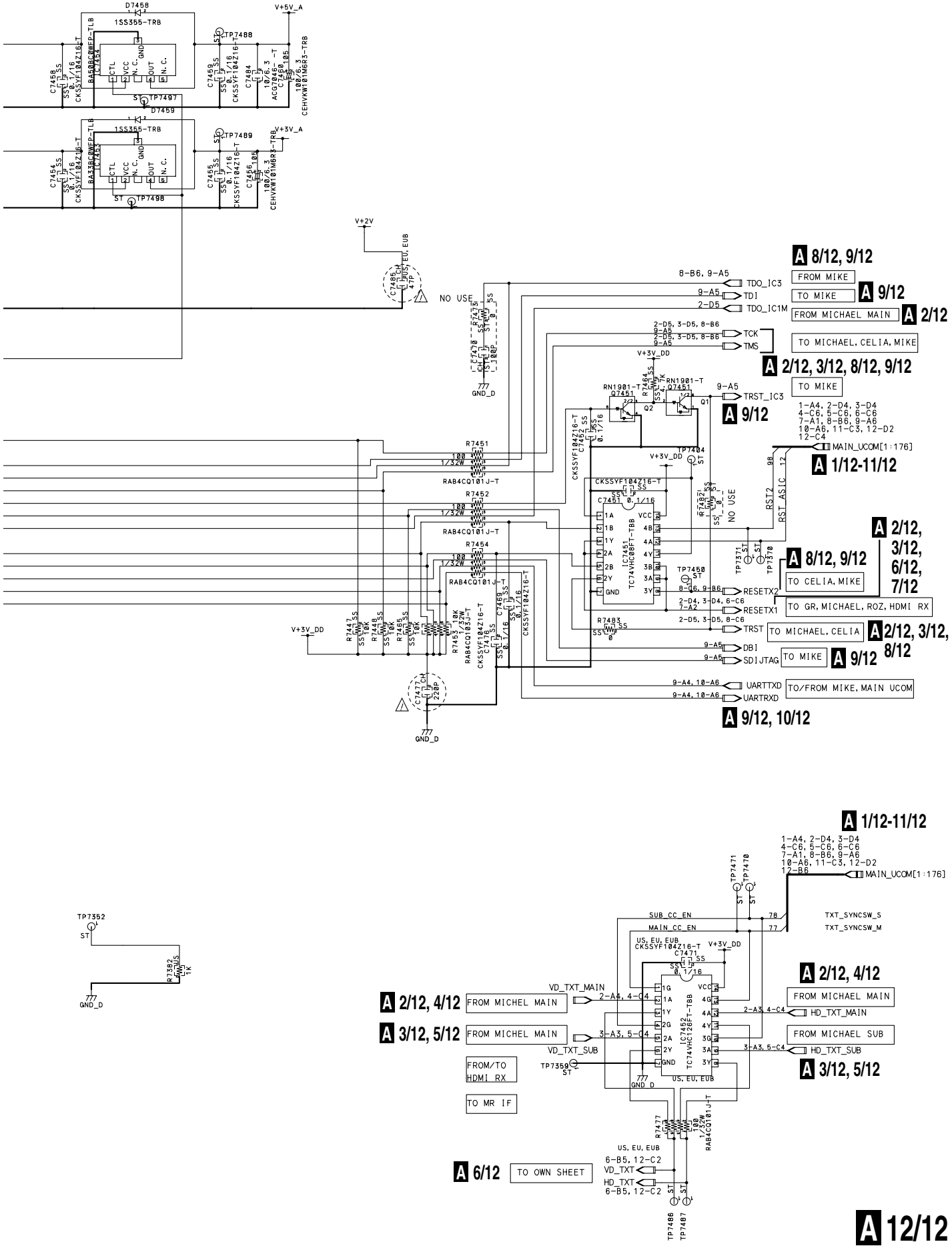

IC7401
SII170BCLG64
DVI TX
IC7403
TC74VCX574FT-TBB
IC7404
TC74VCX08FT-TBB
SIDE A
FROM MIKE
NO USE
BA[0:9]
GA[0:9]
RA[0:9]
HDO
VDO
DEO
CLKO
DE_OUT
HD_OUT
DE_IN
HD_IN
CLK_IN
V+3V_DD
GND_D
F7401
F7402
F7403
L7401
CCG1162- -T
CKSSYF104Z16-T
ATH1162- -T
ACG7046- -T
1-A4, 2-D4, 3-D4
4-C6, 5-C6, 6-C6
7-A1, 8-B6, 9-A6
10-A6, 12-D2, 12-C4
12-B6
MAIN_UCOM[1:176]
TO MAIN UCOM
A 1/12-10/12, 12/12
A 9/12
A 9/12
A 11/12

3.14 MR MAIN BOARD ASSY (12/12)

A 12/12 MR MAIN BOARD ASSY (AWZ6926)

● **REGULATOR BLOCK**

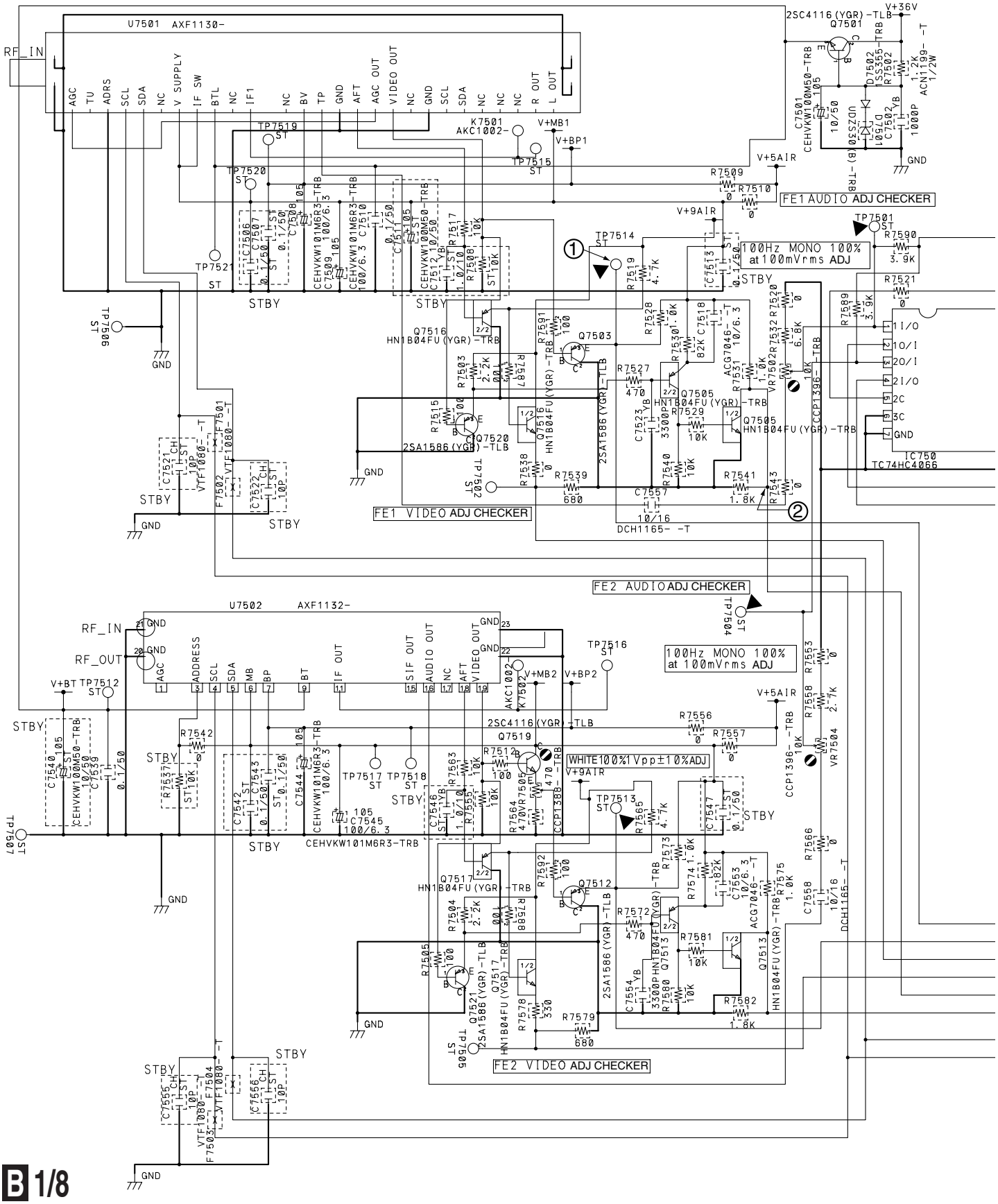



A 8/12, 9/12
FROM MIKE
TO MIKE
A 9/12
FROM MICHAEL MAIN
A 2/12
TO MICHAEL, CELIA, MIKE
A 2/12, 3/12, 8/12, 9/12
TO MIKE
A 9/12
MAIN_UCOM[1:176]
A 1/12-11/12
A 2/12, 3/12, 6/12, 7/12
A 8/12, 9/12
TO CELIA, MIKE
TO GR, MICHAEL, ROZ, HDMI RX
TO MICHAEL, CELIA
A 2/12, 3/12, 8/12
TO MIKE
A 9/12
TO/FROM MIKE, MAIN UCOM
A 9/12, 10/12
A 1/12-11/12
MAIN_UCOM[1:176]
A 2/12, 4/12
FROM MICHEL MAIN
A 3/12, 5/12
FROM MICHEL MAIN
FROM/TO HDMI RX
TO MR IF
A 2/12, 4/12
FROM MICHAEL MAIN
FROM MICHAEL SUB
A 3/12, 5/12
A 6/12
TO OWN SHEET
A 12/12

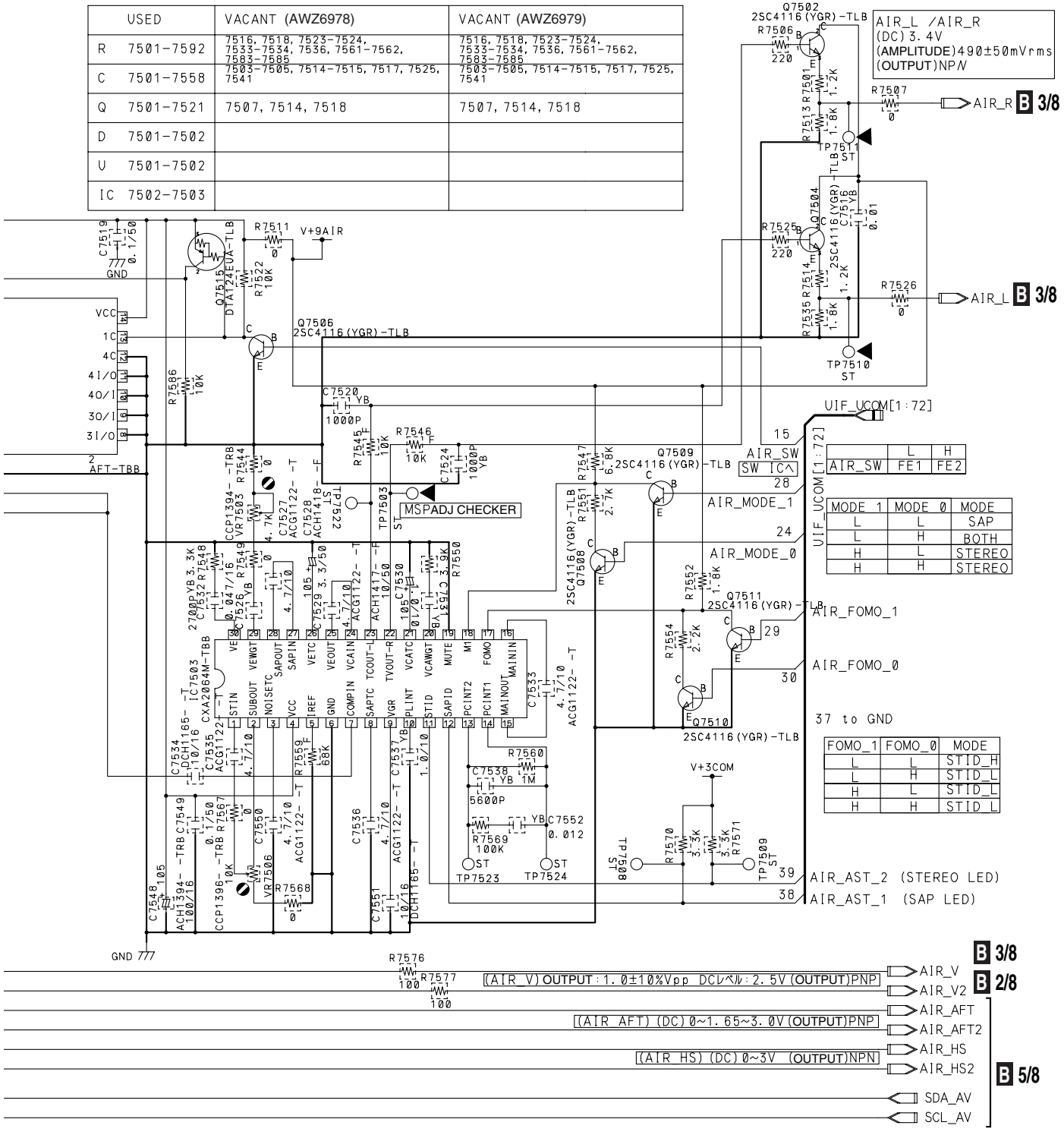
3.15 AV BOARD ASSY (1/8)

B 1/8 AV BOARD ASSY (PDP-R05U : AWZ6978) (PRO-R05U : AWZ6979)

● **TUNER BLOCK**



	USED	VACANT (AWZ6978)	VACANT (AWZ6979)
R	7501-7592	7516, 7518, 7523-7524, 7533-7534, 7536, 7561-7562, 7583-7585	7516, 7518, 7523-7524, 7533-7534, 7536, 7561-7562, 7583-7585
C	7501-7558	7503-7505, 7514-7515, 7517, 7525, 7541	7503-7505, 7514-7515, 7517, 7525, 7541
Q	7501-7521	7507, 7514, 7518	7507, 7514, 7518
D	7501-7502		
U	7501-7502		
IC	7502-7503		

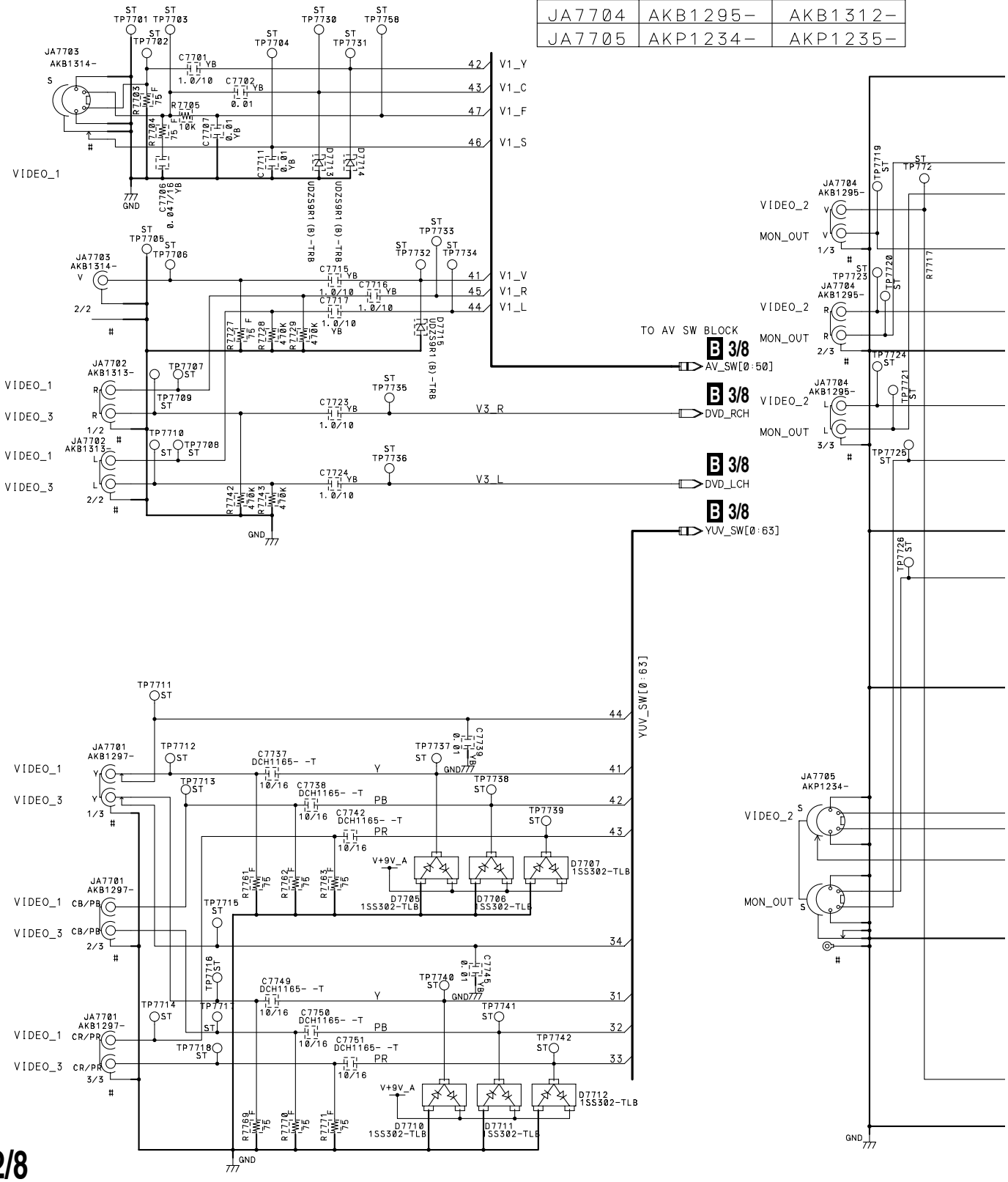


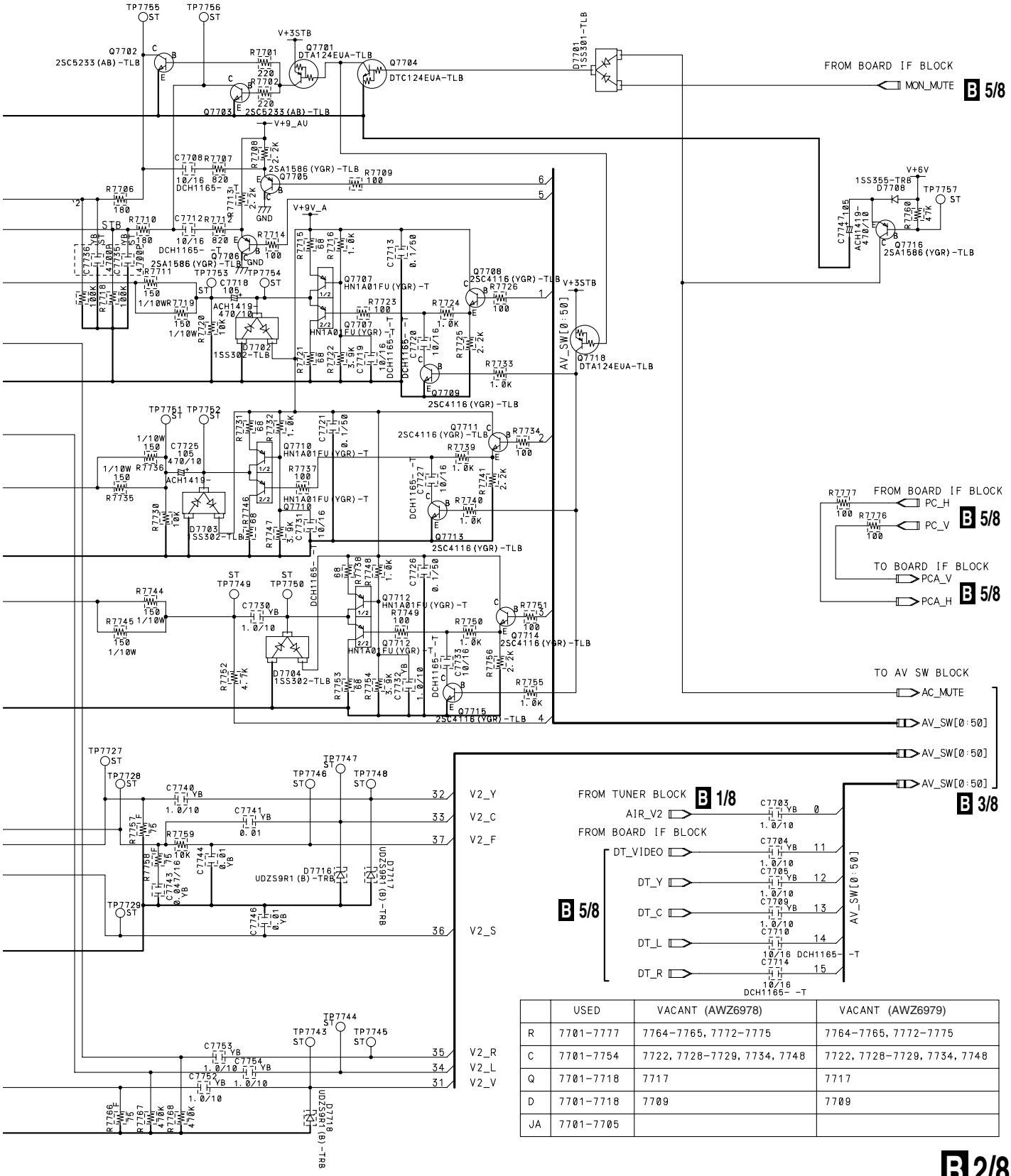
3.16 AV BOARD ASSY (2/8)

B 2/8 AV BOARD ASSY (PDP-R05U : AWZ6978) (PRO-R05U : AWZ6979)

● **AV IO BLOCK**

	AWZ6978	AWZ6979
JA7701	AKB1297-	AKB1298-
JA7702	AKB1313-	AKB1302-
JA7703	AKB1314-	AKB1309-
JA7704	AKB1295-	AKB1312-
JA7705	AKP1234-	AKP1235-



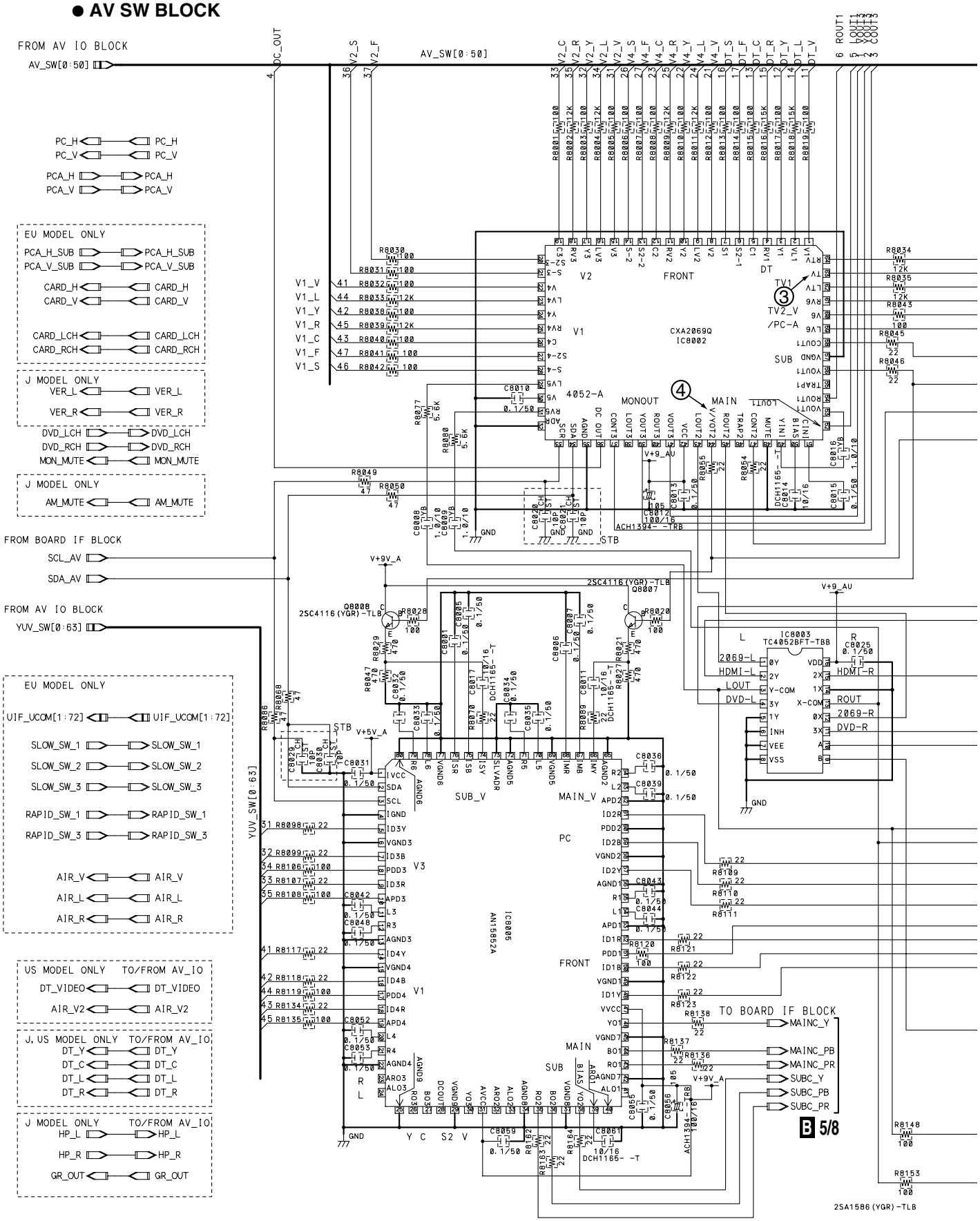


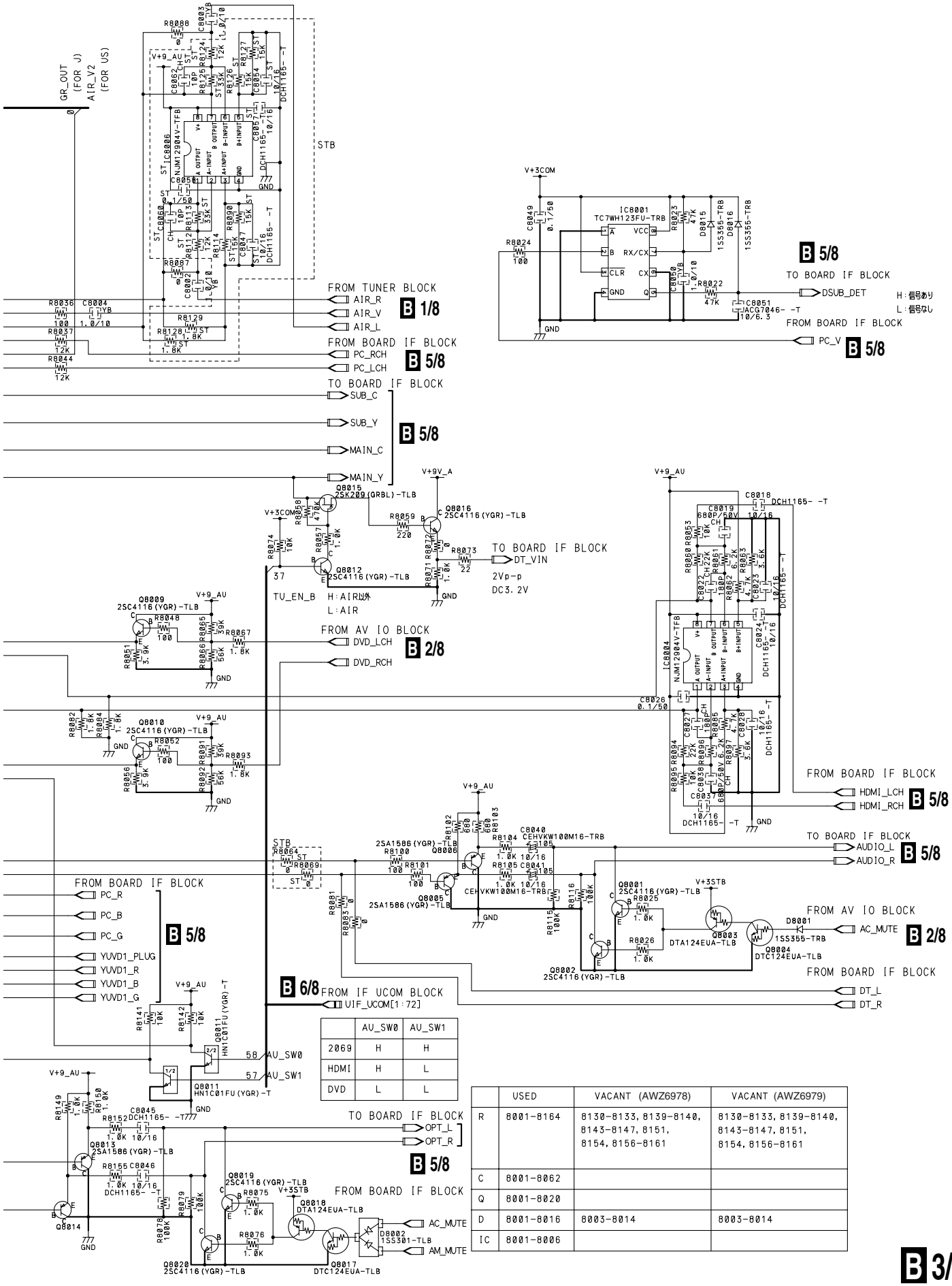
	USED	VACANT (AWZ6978)	VACANT (AWZ6979)
R	7701-7777	7764-7765, 7772-7775	7764-7765, 7772-7775
C	7701-7754	7722, 7728-7729, 7734, 7748	7722, 7728-7729, 7734, 7748
Q	7701-7718	7717	7717
D	7701-7718	7709	7709
JA	7701-7705		

3.17 AV BOARD ASSY (3/8)

B 3/8 AV BOARD ASSY (PDP-R05U : AWZ6978) (PRO-R05U : AWZ6979)

● AV SW BLOCK

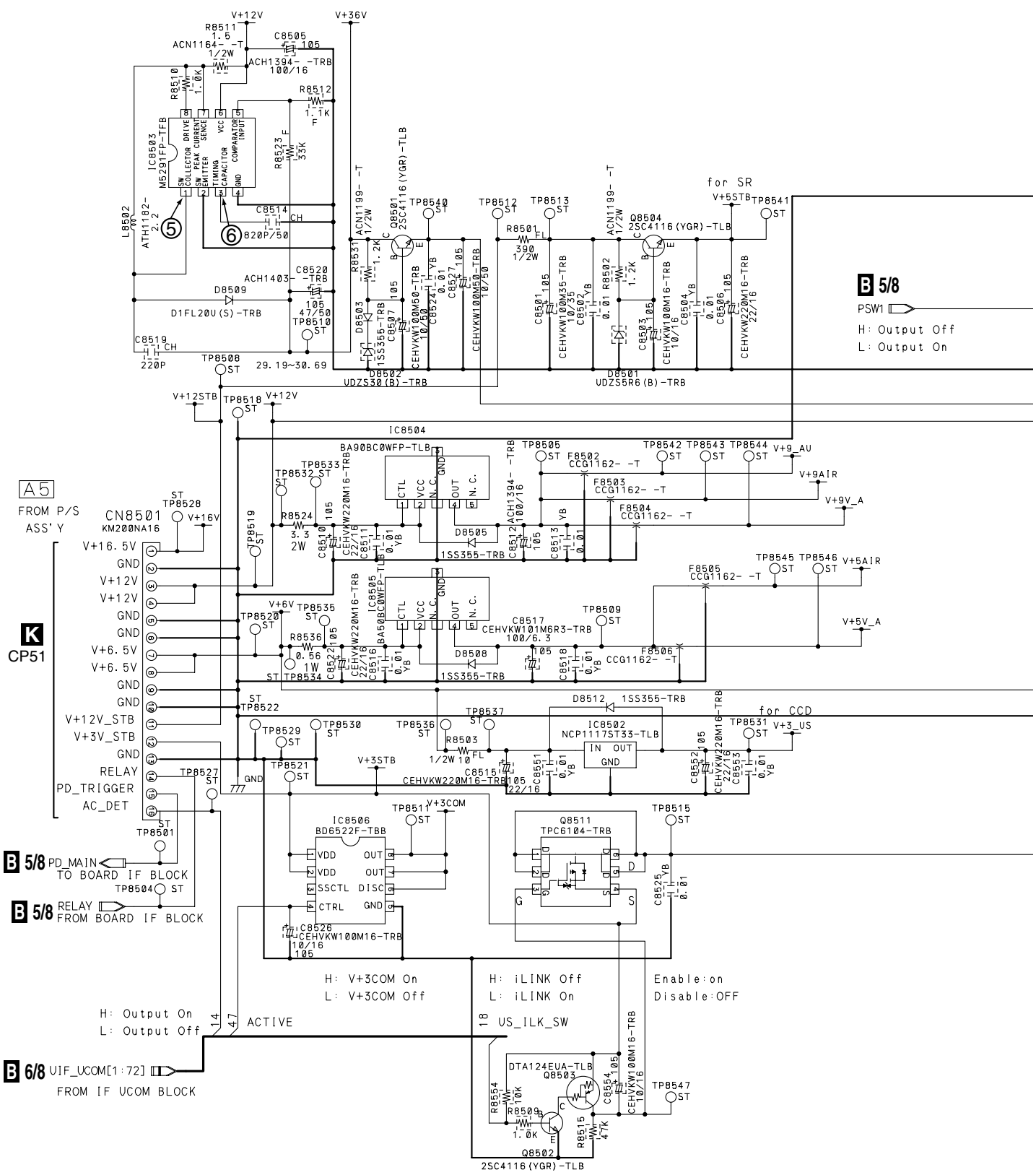




	AU_SW0	AU_SW1
2069	H	H
HDMI	H	L
DVD	L	L

	USED	VACANT (AWZ6978)	VACANT (AWZ6979)
R	8001-8164	8130-8133, 8139-8140, 8143-8147, 8151, 8154, 8156-8161	8130-8133, 8139-8140, 8143-8147, 8151, 8154, 8156-8161
C	8001-8062		
Q	8001-8020		
D	8001-8016	8003-8014	8003-8014
IC	8001-8006		

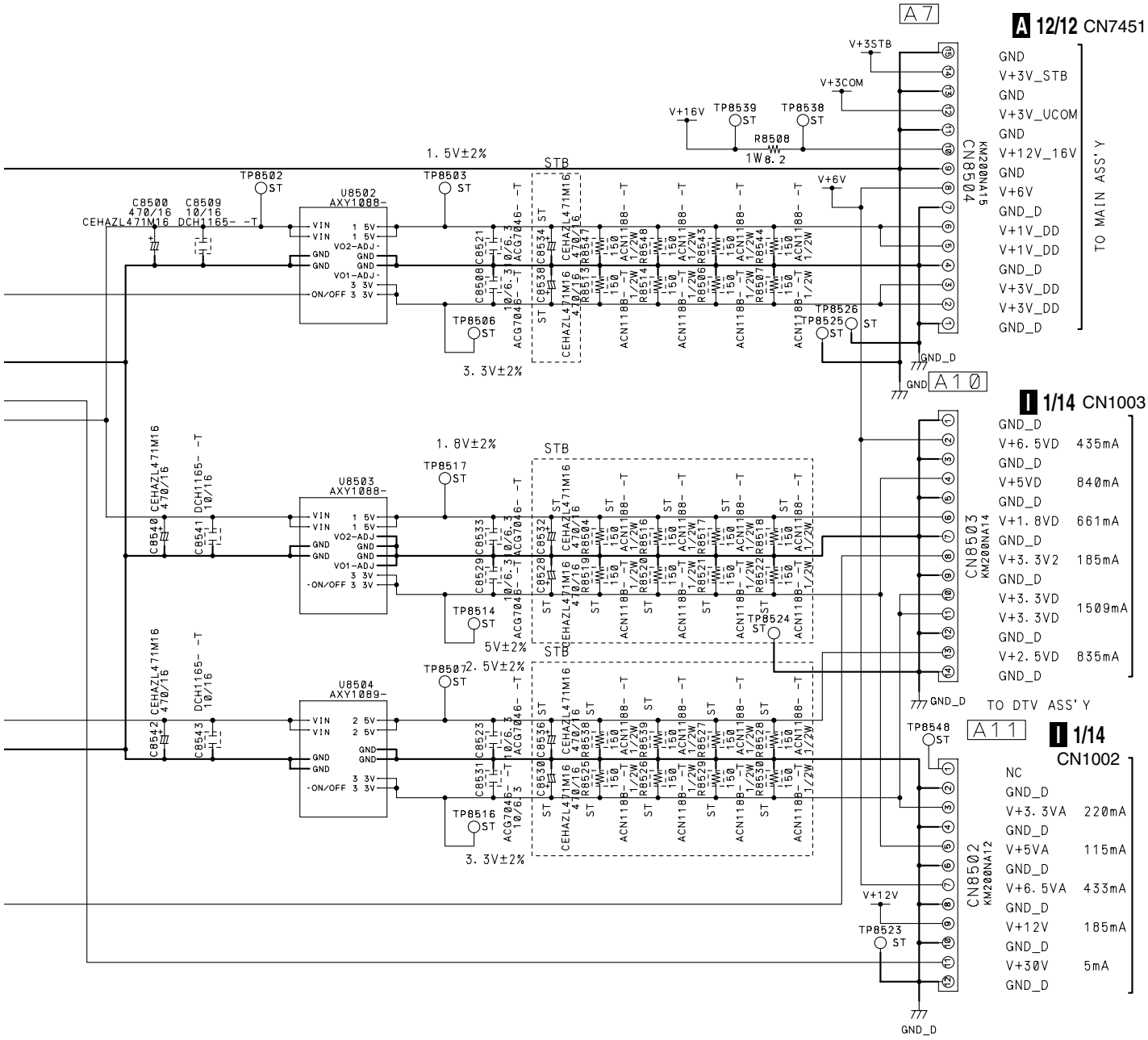
3.18 AV BOARD ASSY (4/8)



B 4/8

B 4/8 AV BOARD ASSY (PDP-R05U : AWZ6978) (PRO-R05U : AWZ6979)

● AV REG BLOCK

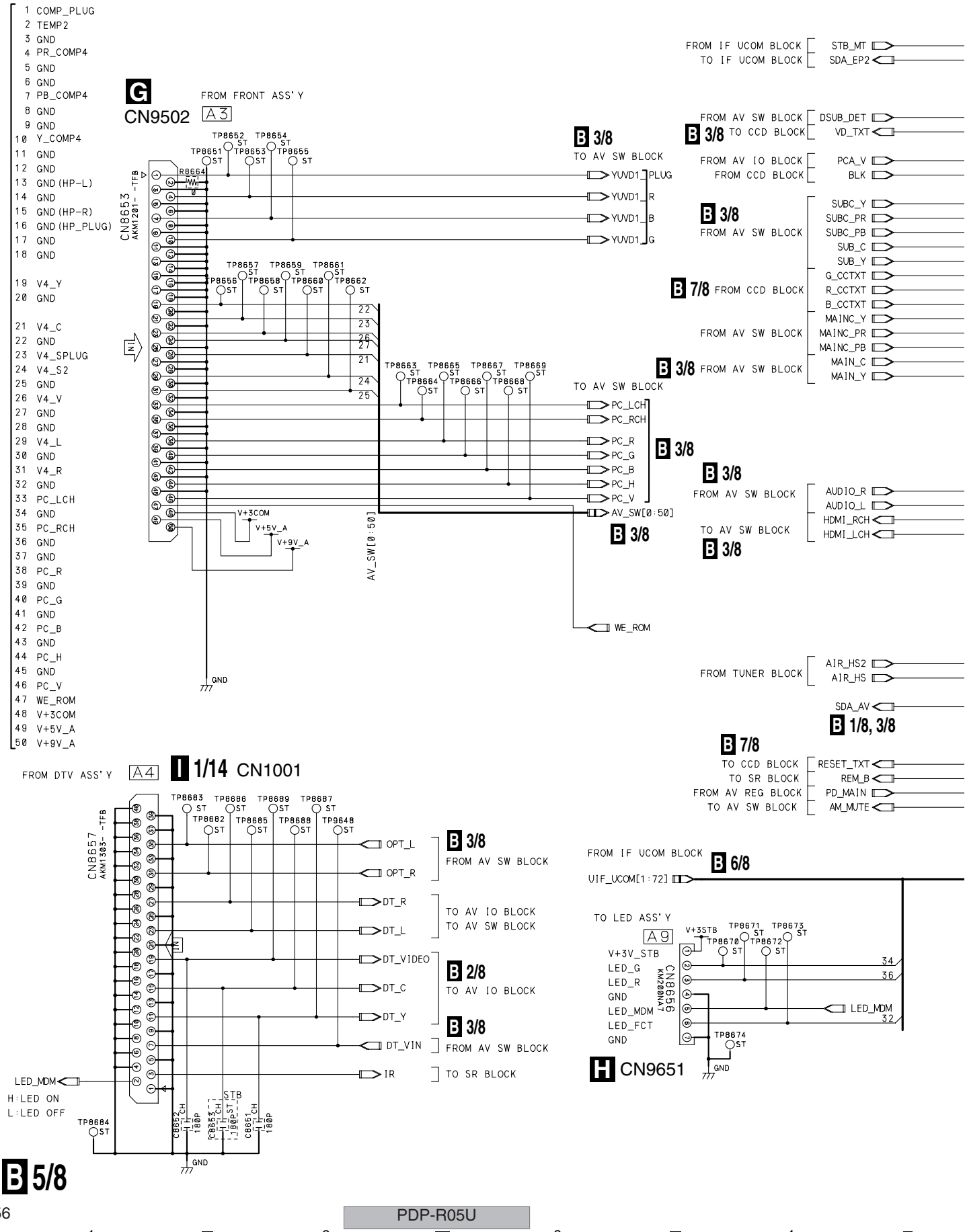


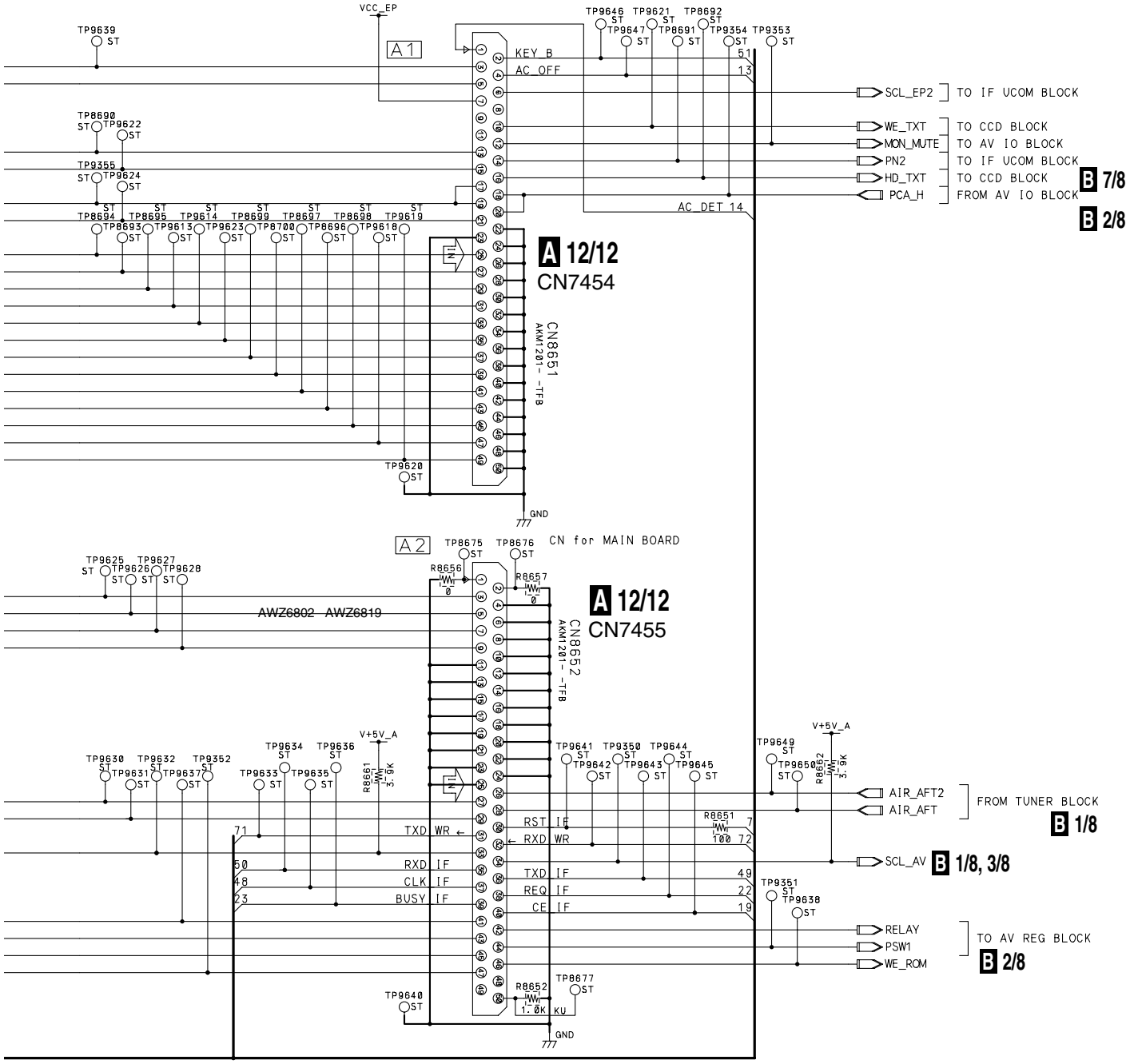
	USED	VACANT (AWZ6978)	VACANT (AWZ6979)
R	8501-8554	8505, 8532-8535, 8537, 8540-8542, 8545-8546, 8549-8553	8505, 8532-8535, 8537, 8540-8542, 8545-8546, 8549-8553
C	8500-8554	8535, 8537, 8539, 8544-8550	8535, 8537, 8539, 8544-8550
Q	8501-8511	8505-8510	8505-8510
D	8501-8512	8504, 8506-8507, 8510-8511	8504, 8506-8507, 8510-8511
U	8502-8504		
IC	8502-8506		
CN	8501-8504		

3.19 AV BOARD ASSY (5/8)

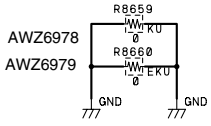
B 5/8 AV BOARD ASSY (PDP-R05U : AWZ6978) (PRO-R05U : AWZ6979)

● **BOARD IF BLOCK**





ELITE_DET	AWZ6978	AWZ6979
R8652	1kΩ	Not used



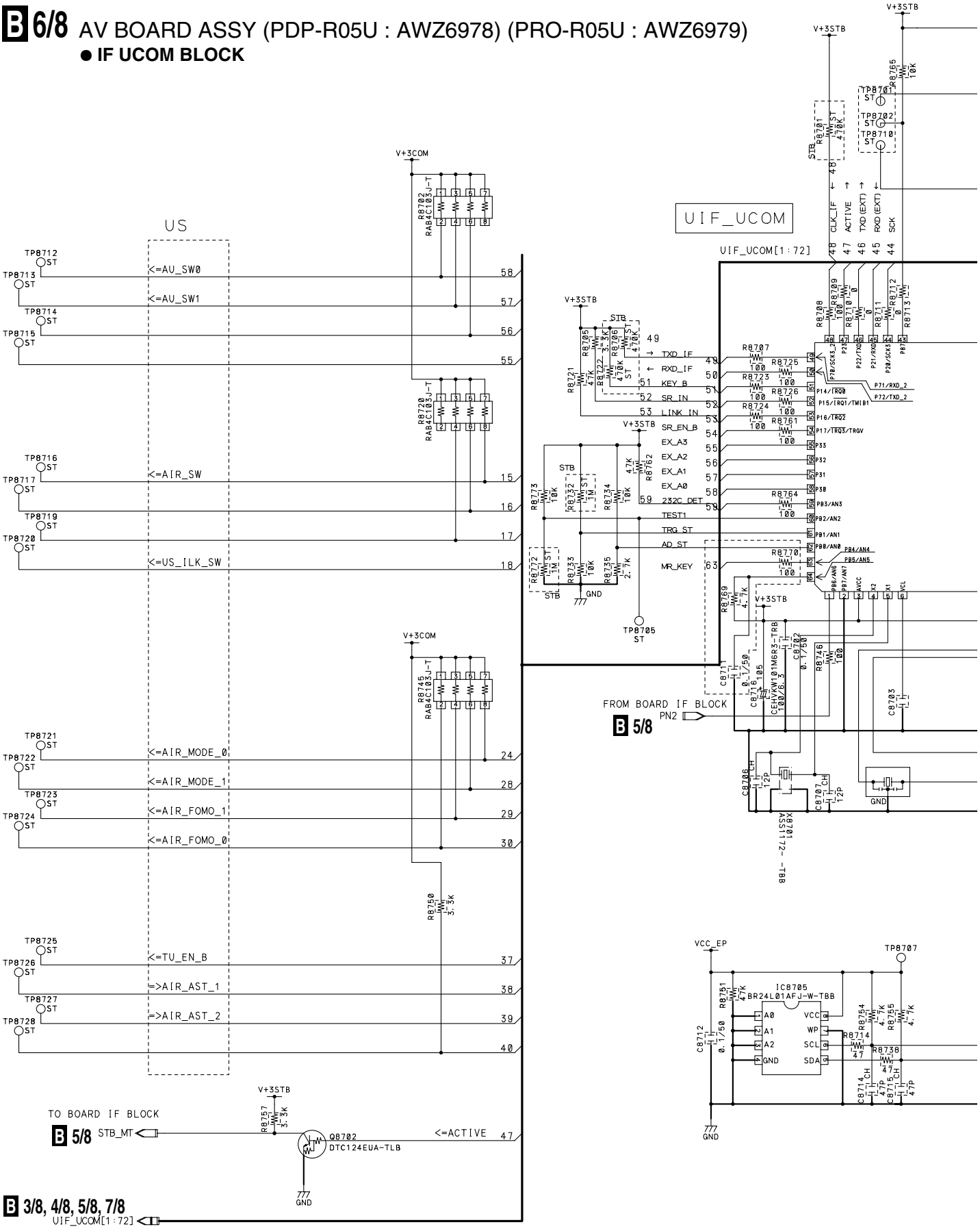
	USED	VACANT (AWZ6978)	VACANT (AWZ6979)
R	8651–8664	8653–55, 8658, 8660, 8663	8652–55, 8658–8659, 8663
C	8651–8653		
CN	8651–8657	8654–8655	8654–8655

B 5/8

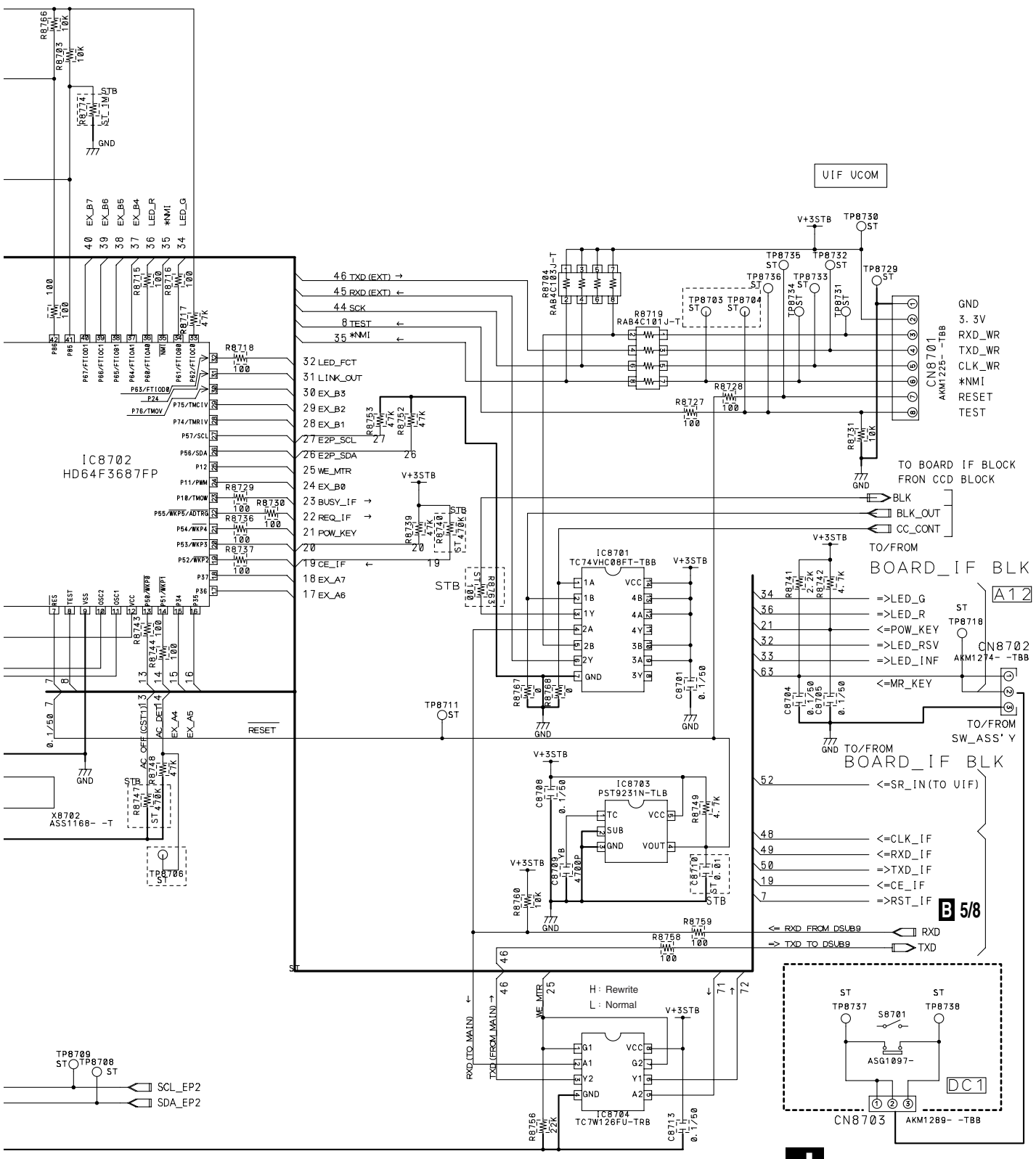
3.20 AV BOARD (6/8) and SW ASSYS

B 6/8 AV BOARD ASSY (PDP-R05U : AWZ6978) (PRO-R05U : AWZ6979)

● **IF UCOM BLOCK**



B 6/8



	USED	VACANT (AWZ6978)	VACANT (AWZ6979)
R	8701-8774	8771	8771
C	8701-8716		
Q	8702		
D			
X	8701-8702		
IC	8701-8705		
CN	8701		

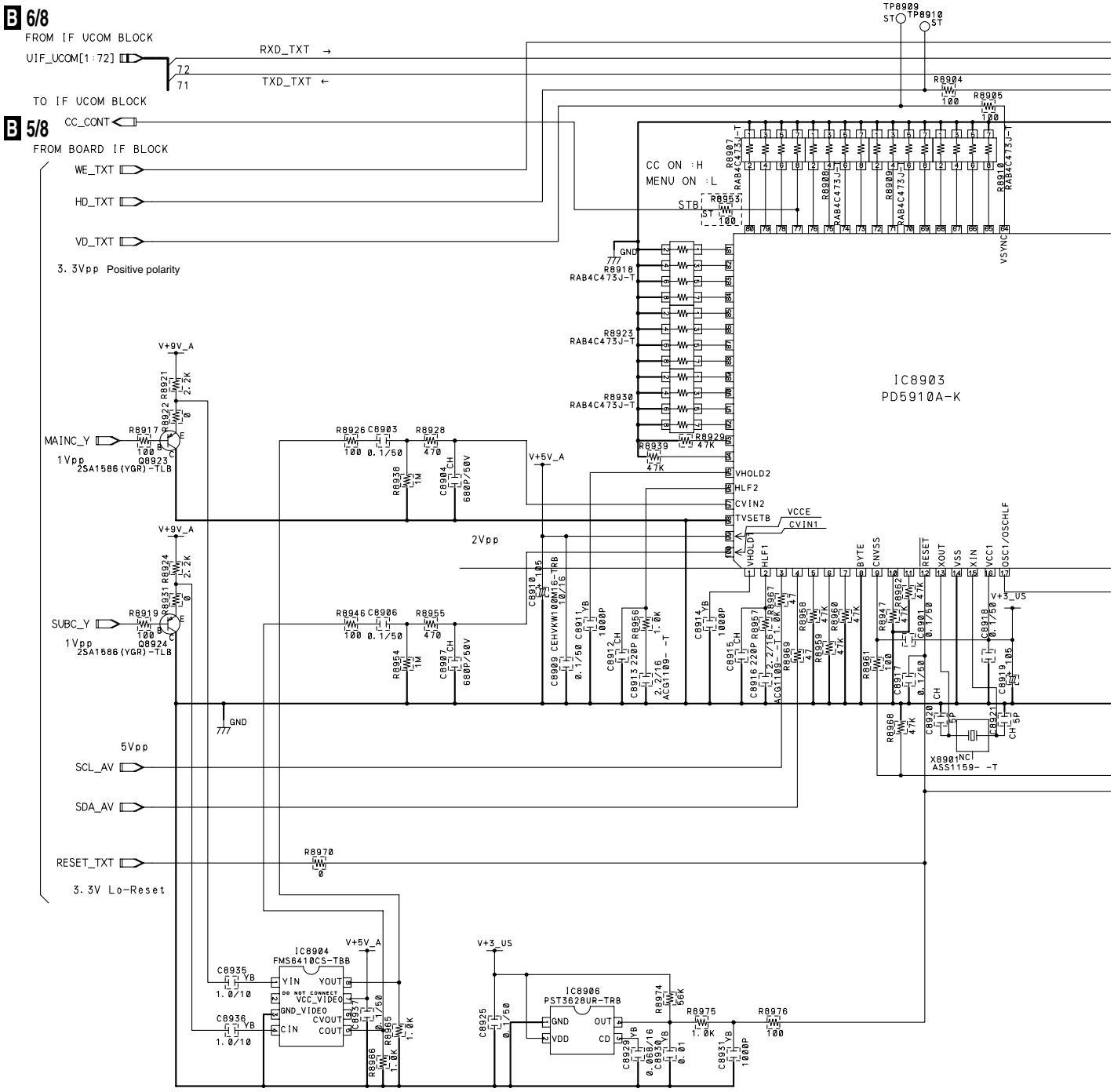
J SW ASSY
(AWZ6977)

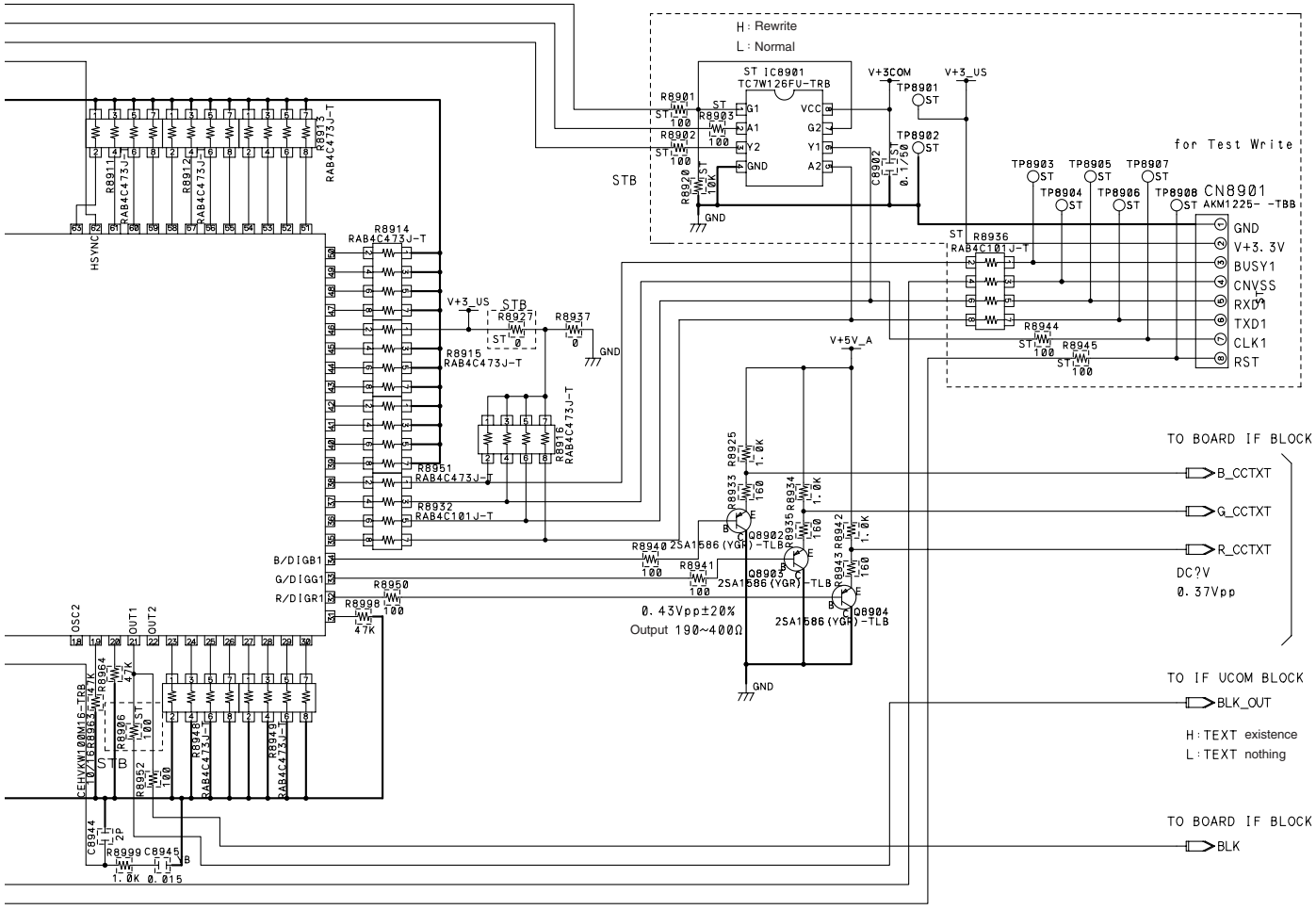
B 6/8 J

3.21 AV BOARD ASSY (7/8)

B 7/8 AV BOARD ASSY (PDP-R05U : AWZ6978) (PRO-R05U : AWZ6979)

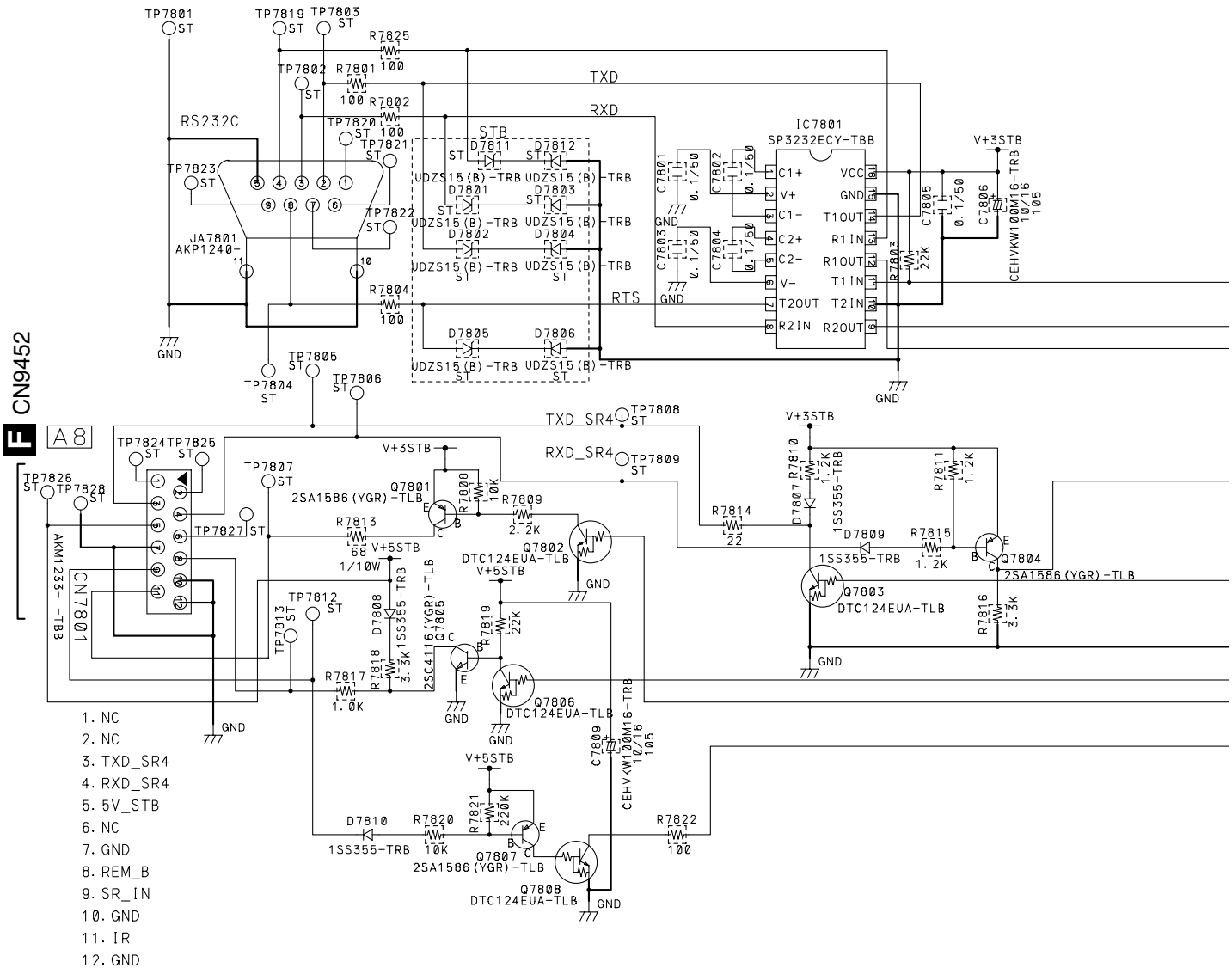
● **CCD BLOCK**

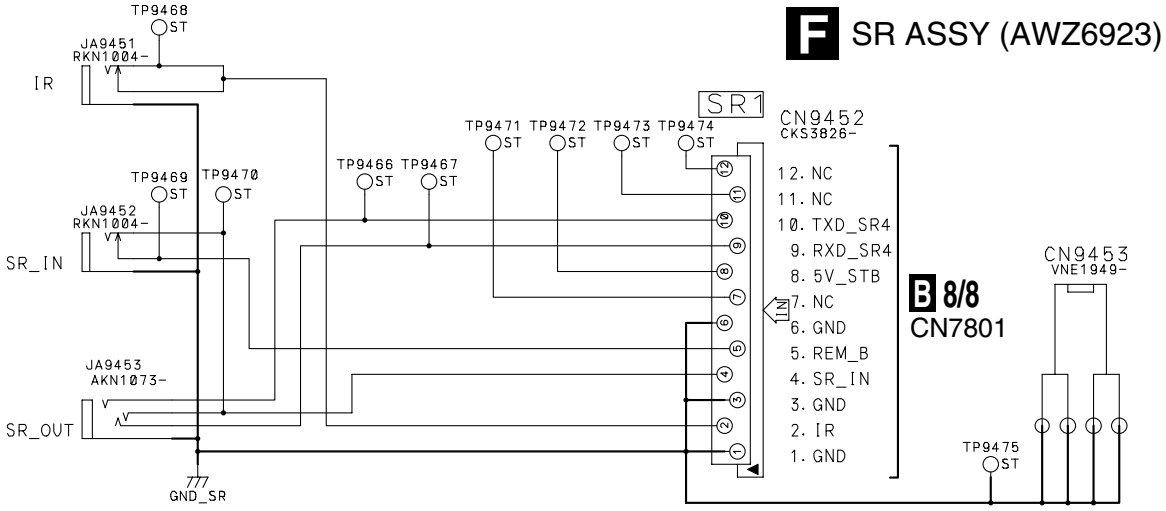




	USED	VACANT (AWZ6978)	VACANT (AWZ6979)
R	8901-8976	8971-8973	8971-8973
C	8901-8945	8905, 8908, 8922-8924, 8926-8928, 8932-8934, 8938-8943	8905, 8908, 8922-8924, 8926-8928, 8932-8934, 8938-8943
Q	8902-8924	8905-8922	8905-8922
D			
X	8901		
IC	8901-8906	8902, 8905	8902, 8905
CN	8901		

3.22 AV BOARD (8/8) and SR ASSYS

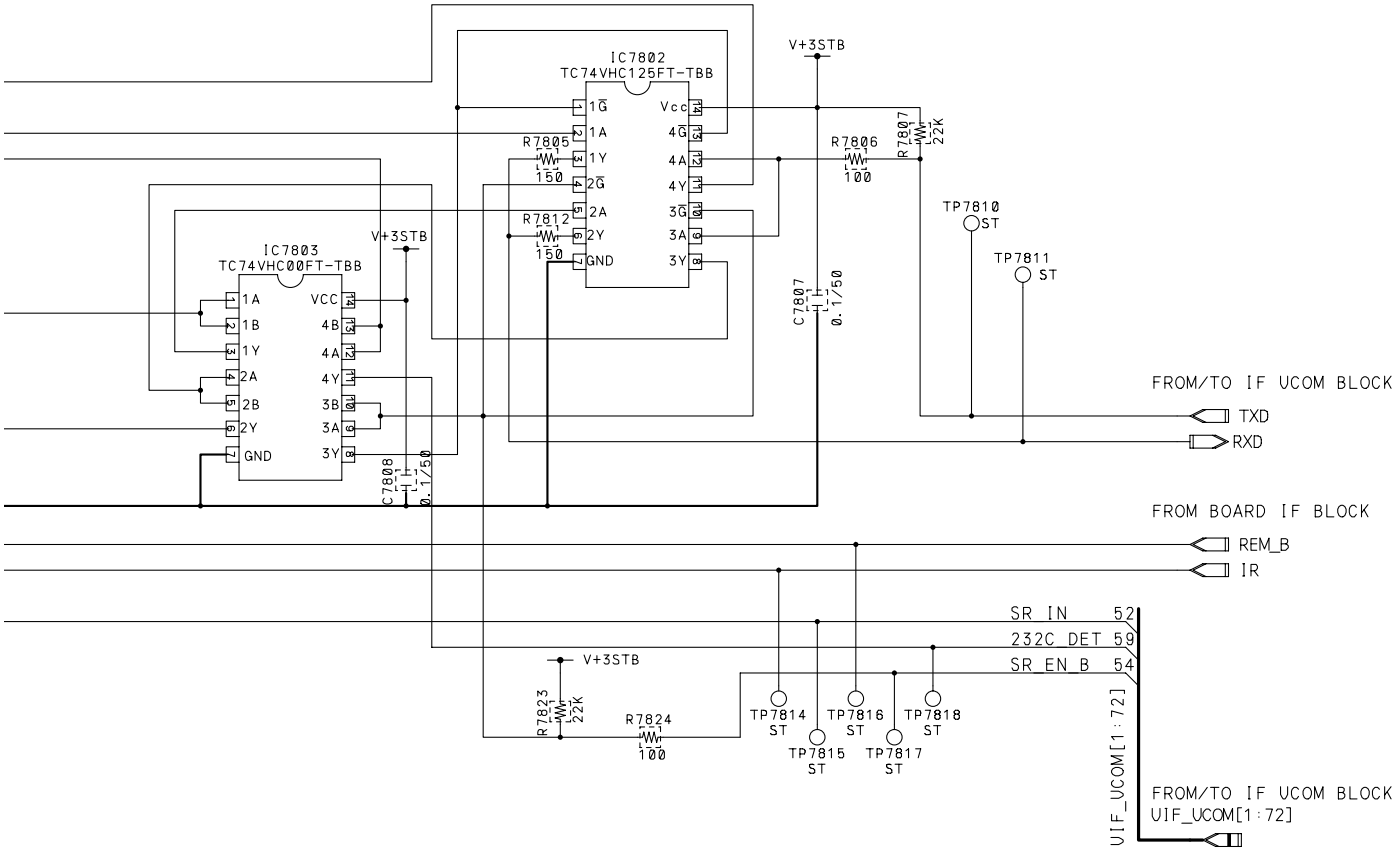




	USED	VACANT
CN	9452-9453	
JA	9451-9453	

B 8/8 F

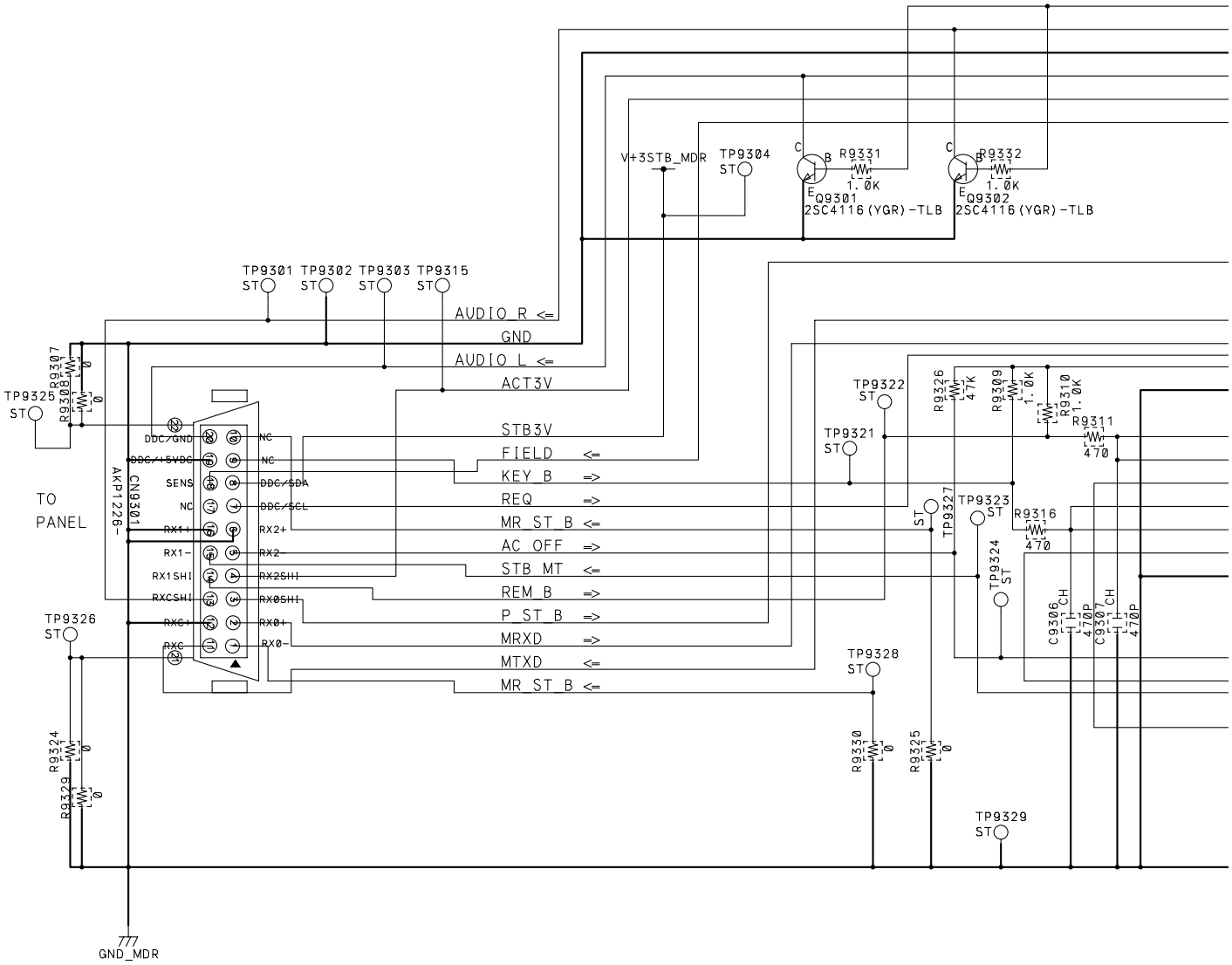
B 8/8 AV BOARD ASSY (PDP-R05U : AWZ6978) (PRO-R05U : AWZ6979)



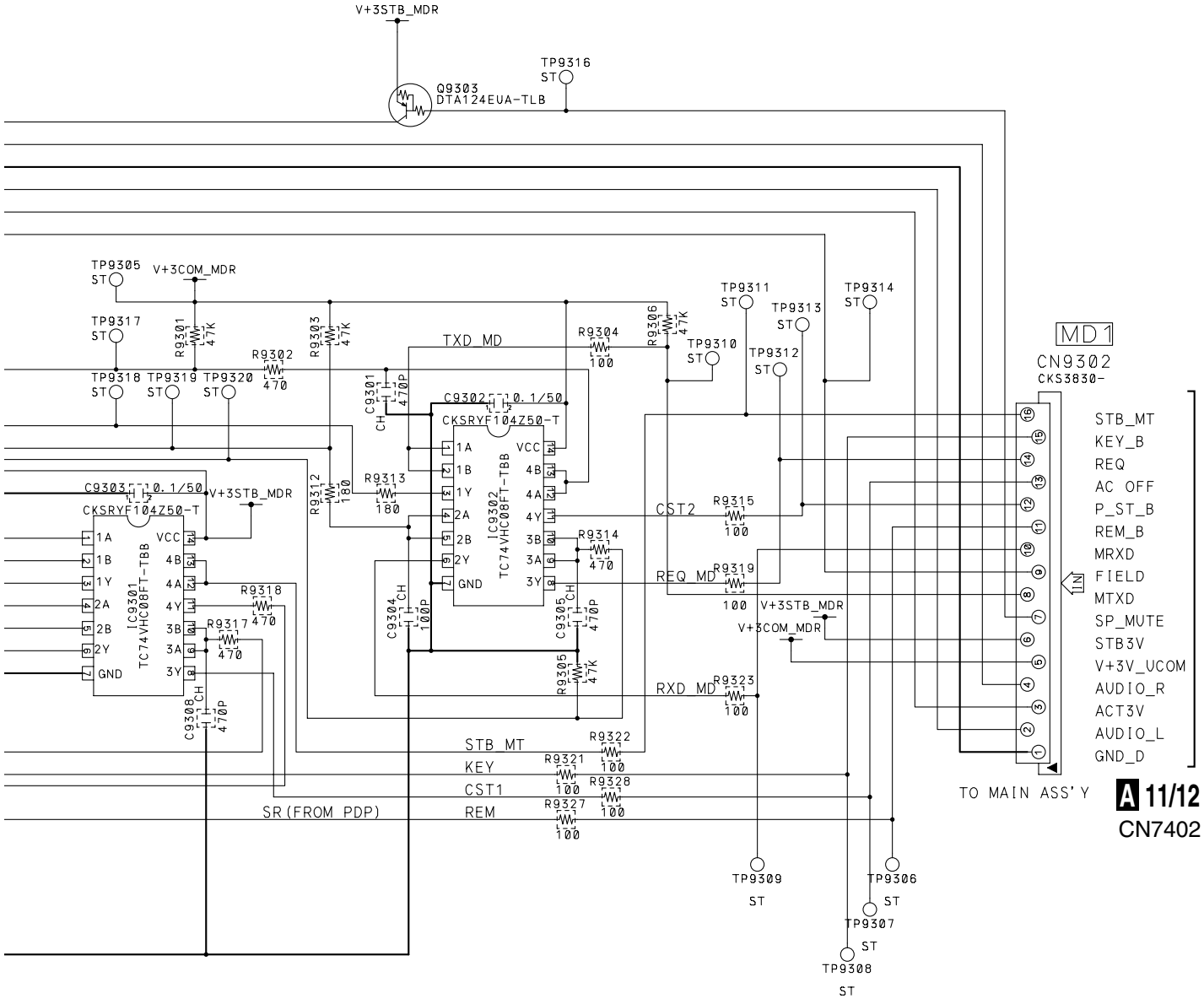
	USED	VACANT
R	7801-7826	
C	7801-7809	
Q	7801-7808	
D	7801-7812	
IC	7801-7803	
CN	7801	
JA	7801	

3.23 MDR ASSY

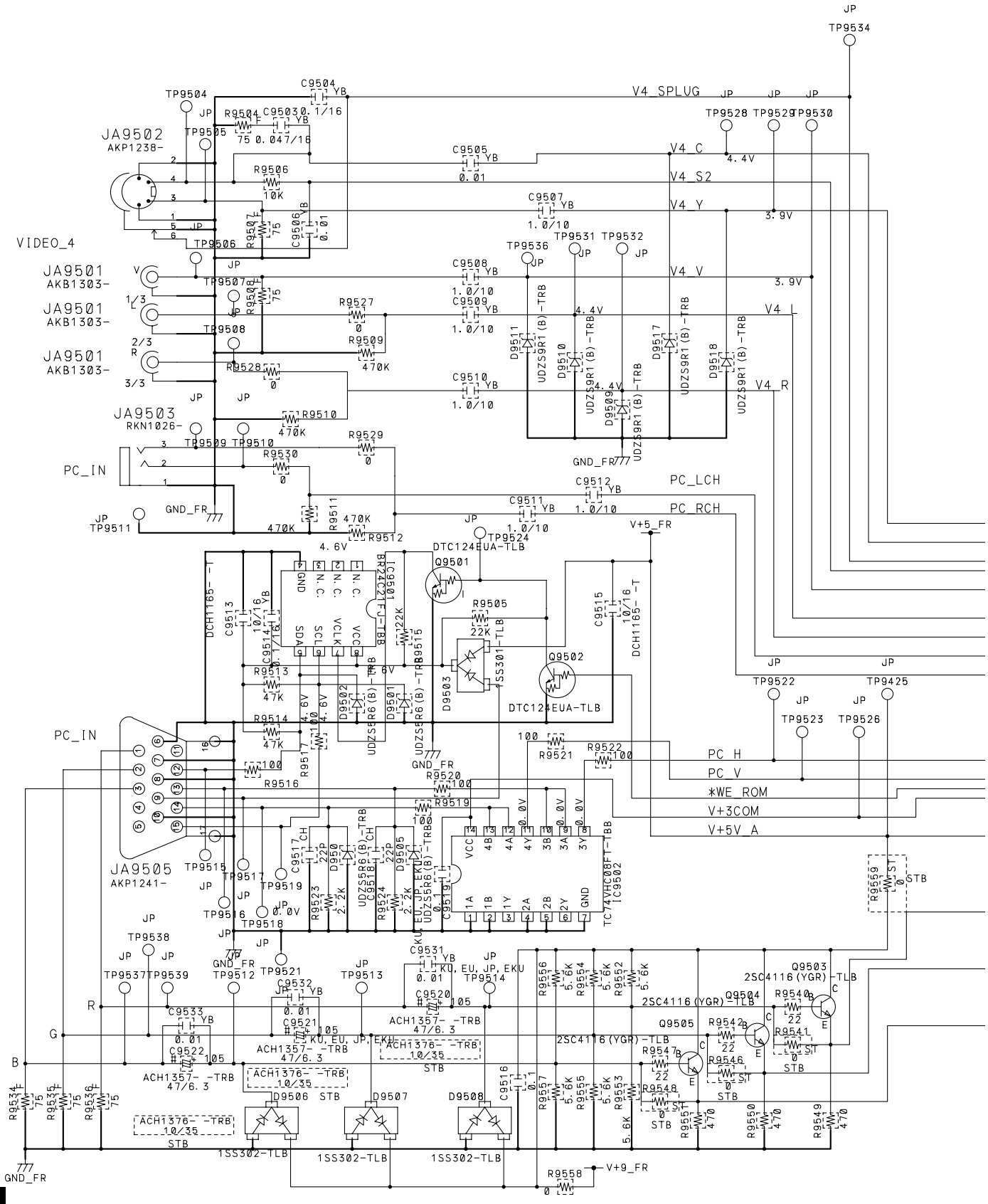
E MDR ASSY (AWZ6922)



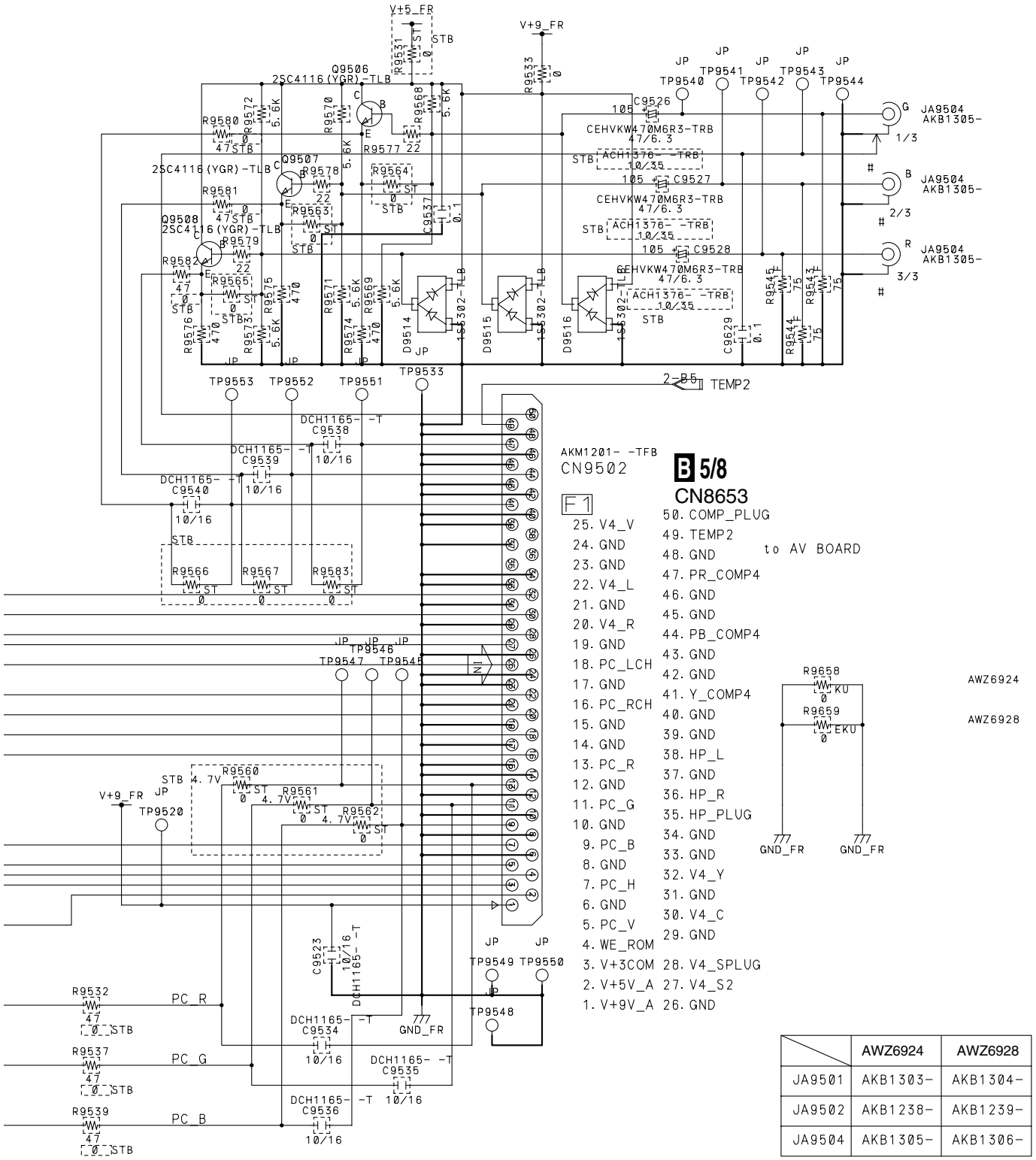
	USED	VACANT(AWZ6922)
R	9301-9330	9320
C	9301-9308	
Q	9301-9303	
D		
IC	9301-9302	
CN	9301-9302	


V+3STB_MDR
TP9316
ST
Q9303
DTA124EUA-TLB
TP9305
ST
V+3COM_MDR
TP9317
ST
R9301
47K
R9303
47K
R9302
470
TXD_MD
R9304
100
R9306
47K
TP9311
ST
TP9313
ST
TP9314
ST
TP9310
ST
TP9312
ST
TP9318
ST
TP9319
ST
TP9320
ST
C9301
CH
470P
C9302
0.1/50
CKSRYF104Z50-T
IC9302
TC74VHC08FT-TBB
1A
1B
1Y
2A
2B
2Y
GND
VCC
4B
4A
4Y
3B
3A
3Y
C9303
0.1/50
V+3STB_MDR
CKSRYF104Z50-T
R9312
180
R9313
180
CST2
R9315
100
R9314
470
REQ_MD
R9319
100
V+3STB_MDR
V+3COM_MDR
IC9301
TC74VHC08FT-TBB
R9318
470
R9317
470
C9304
CH
100P
C9305
CH
470P
R9305
47K
RXD_MD
R9323
100
C9308
CH
470P
STB_MT
KEY
CST1
REM
SR(FROM PDP)
R9322
100
R9321
100
R9328
100
R9327
100
TP9309
ST
TP9306
ST
TP9307
ST
TP9308
ST
MD1
CN9302
CKS3830-
STB_MT
KEY_B
REQ
AC OFF
P_ST_B
REM_B
MRXD
FIELD
MTXD
SP_MUTE
STB3V
V+3V_UCOM
AUDIO_R
ACT3V
AUDIO_L
GND_D
TO MAIN ASS'Y
A 11/12
CN7402

3.24 FRONT ASSY



G FRONT ASSY (PDP-R05U : AWZ6924)
(PRO-R05U : AWZ6928)

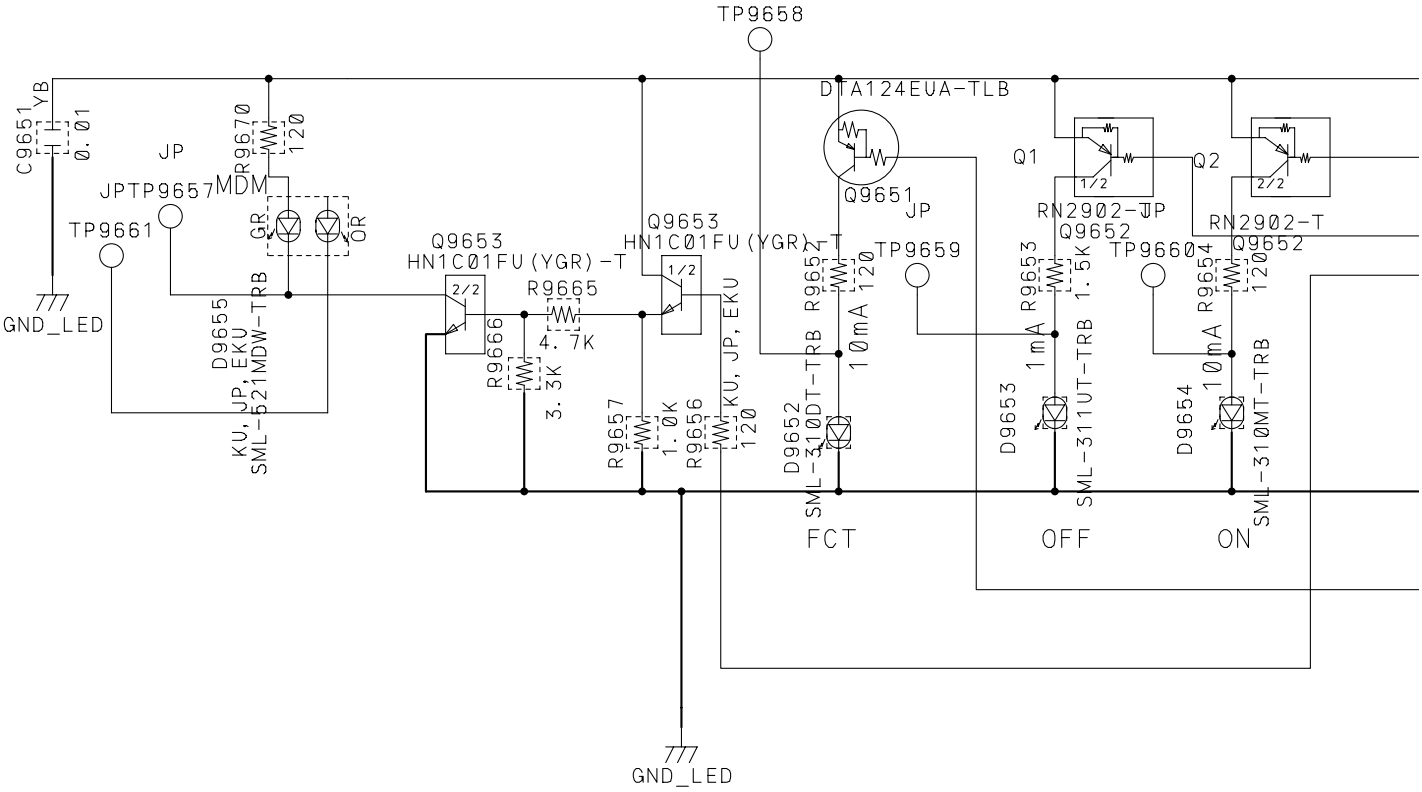


	AWZ6924	AWZ6928
JA9501	AKB1303-	AKB1304-
JA9502	AKB1238-	AKB1239-
JA9504	AKB1305-	AKB1306-

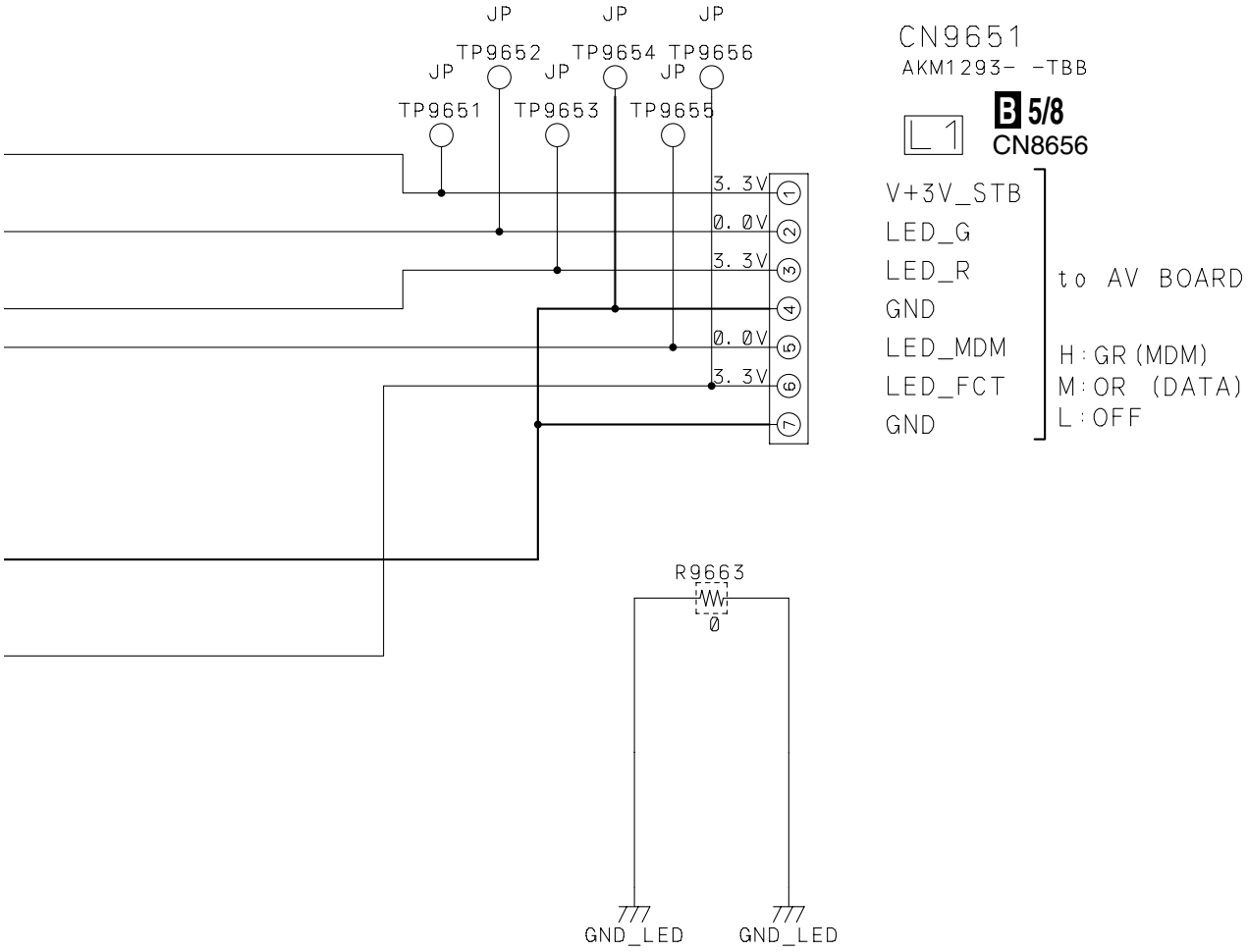
ITEM	USED	VACANT
R	9501-9583 9651, 9658-9661	9531, 9541, 9548, 9559-9567, 9538
C	9501-9540	
Q	9501-9508	
D	9501-9518	
IC	9501-9502	
CN	9502-9503	
JA	9501-9505	

3.25 LED ASSY

H LED ASSY (AWZ6925)



ITEM	USED	VACANT
R	9652-9671	9658-9661
C	9651, 9652	
Q	9651-9654	
D	9652-9655	
IC		
CN	9651	


JP
JP
JP
TP9652
TP9654
TP9656
JP
JP
JP
TP9651
TP9653
TP9655
3.3V
0.0V
3.3V
0.0V
3.3V
1
2
3
4
5
6
7
R9663
0
GND_LED
GND_LED
CN9651
AKM1293- -TBB
L1
B 5/8
CN8656
V+3V_STB
LED_G
LED_R
GND
LED_MDM
LED_FCT
GND
to AV BOARD
H:GR(MDM)
M:OR (DATA)
L:OFF

3.26 TUNER BOARD ASSY (1/14)

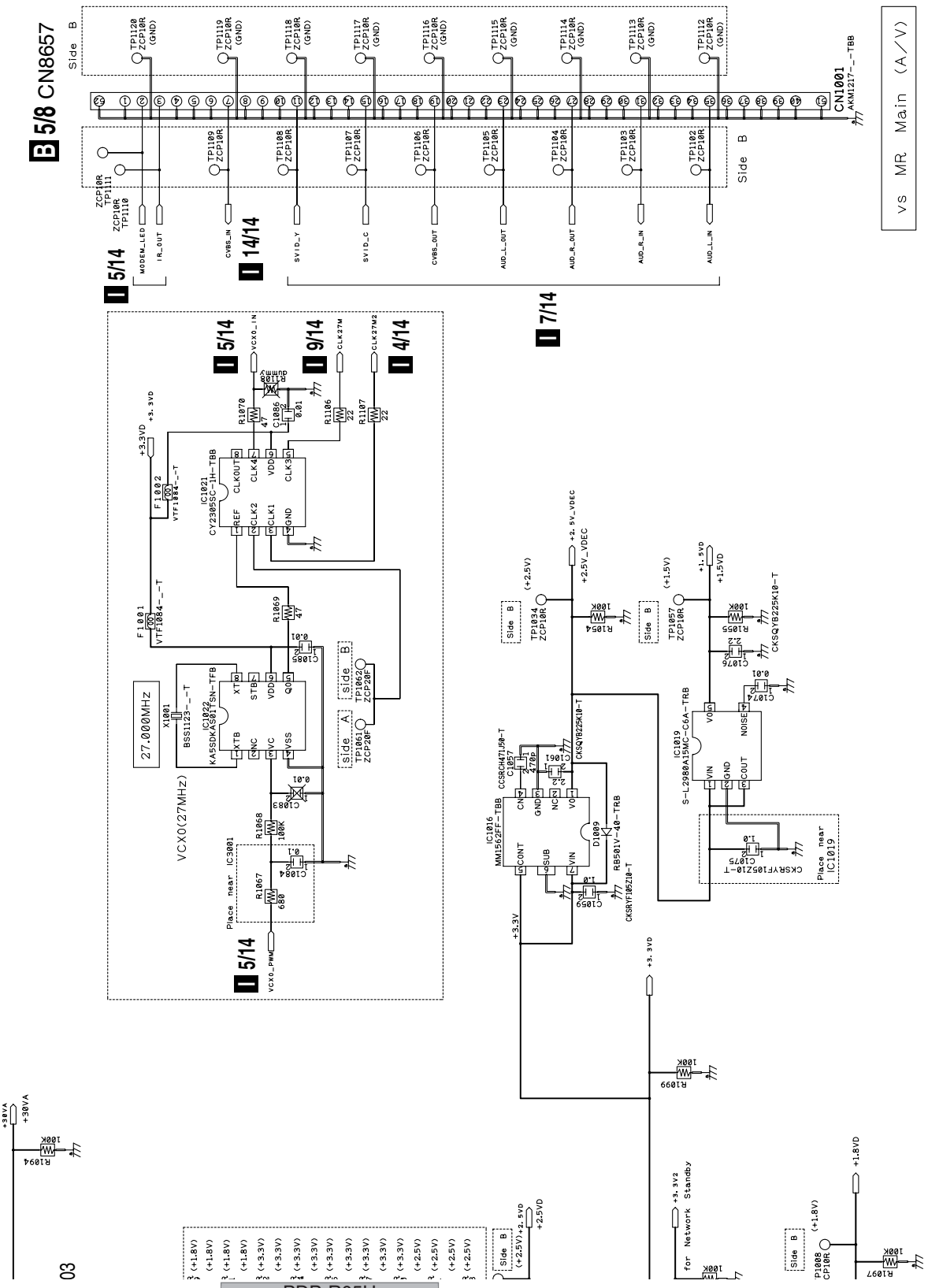
1/14 TUNER BOARD ASSY (AWE1300)

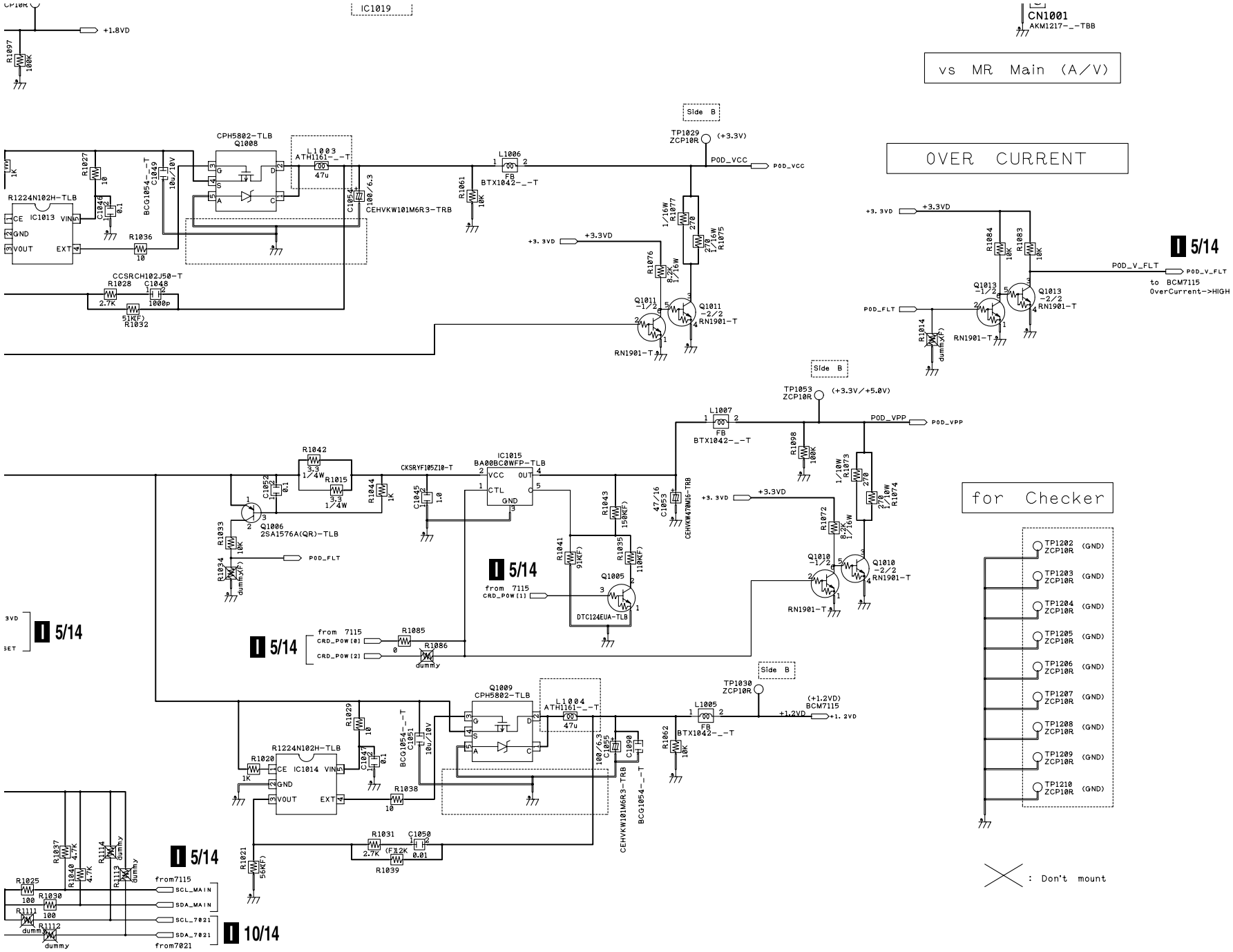
Large size SCH diagram

1/2

2/2

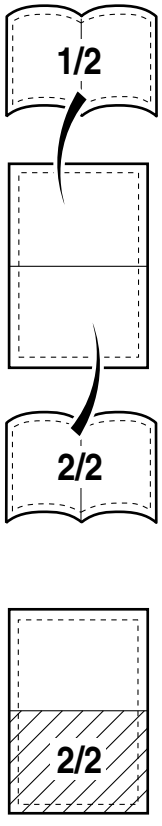
1/2




IC1019
CN1001
AKM1217-_-TBB
vs MR Main (A/V)
OVER CURRENT
for Checker
Side B
+1.8VD
R1097
100K
CPH5802-TLB
Q1008
L1003
ATH1161-_-T
47u
L1006
FB
BTX1042-_-T
TP1029
ZCP10R
(+3.3V)
P0D_VCC
R1224N102H-TLB
IC1013
CE
GND
VOUT
VIN
EXT
R1027
10
C1049
10u/10V
BCG1054-_-T
C1048
0.1
R1036
10
C1054
100/6.3
CEHVKW101M6R3-TRB
R1061
10K
+3.3VD
R1076
8.2K/1/16W
1/16W
R1077
270
2/1/16W
R1075
Q1011
-1/2
-2/2
RN1901-T
CCSRCH102J50-T
R1028
2.7K
C1048
1000p
5.1K(F)
R1032
R1084
10K
R1083
10K
Q1013
P0D_V_FLT
to BCM7115
OverCurrent->HIGH
P0D_FLT
R1014
dummy(F)
5/14
TP1053
ZCP10R
(+3.3V/+5.0V)
L1007
P0D_VPP
R1098
100K
R1073
270
1/10W
R1074
R1042
3.3
1/4W
R1015
IC1015
BA00BC0WFP-TLB
VCC
OUT
CTL
GND
CKSRYF105Z10-T
R1044
1K
C1045
1.0
C1052
0.1
Q1006
2SA1576A(QR)-TLB
R1033
10K
R1034
dummy(F)
R1043
150K(F)
R1041
91K(F)
R1035
110K(F)
47/16
C1053
CEHVKW470M16-TRB
Q1005
DTC124EUA-TLB
R1072
8.2K/1/16W
Q1010
from 7115
CRD_POW[1]
CRD_POW[0]
CRD_POW[2]
R1085
R1086
dummy
Q1009
CPH5802-TLB
L1004
ATH1161-_-T
TP1030
ZCP10R
(+1.2VD)
BCM7115
+1.2VD
L1005
BTX1042-_-T
R1062
10K
R1029
10
C1047
0.1
C1051
10u/10V
R1020
1K
R1038
10
C1055
100/6.3
C1050
R1031
2.7K
R1039
0.01
R1021
56K(F)
R1037
4.7K
R1040
4.7K
R1114
dummy
R1113
dummy
R1025
100
R1030
100
R1111
100
R1112
dummy
from7115
SCL_MAIN
SDA_MAIN
SCL_7021
SDA_7021
from7021
10/14
TP1202
TP1203
TP1204
TP1205
TP1206
TP1207
TP1208
TP1209
TP1210
(GND)
: Don't mount

PDP-R05U

Large size SCH diagram



RESET

EEPROM

FAN Vcc

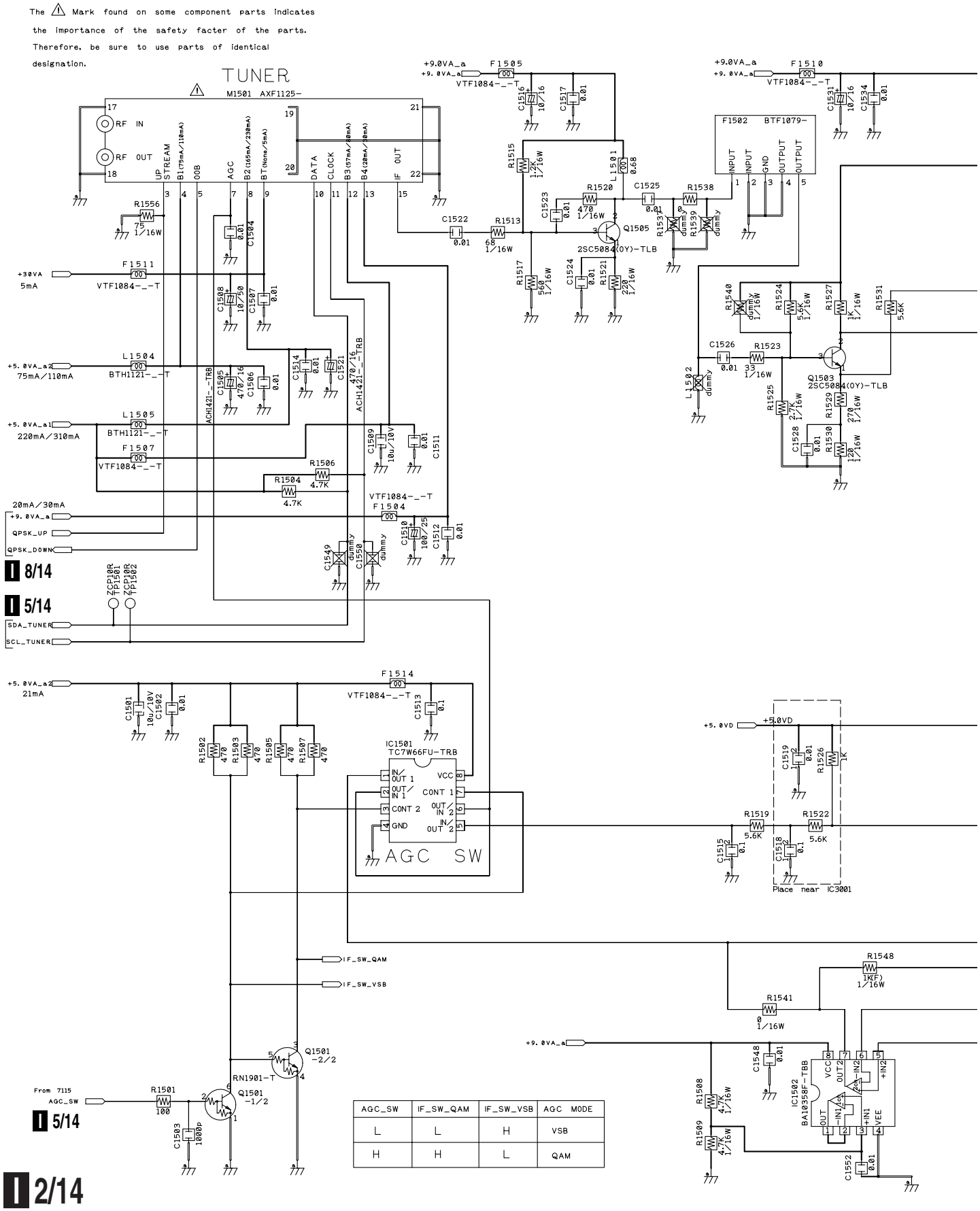
MODE	STANDBY CTL
STANDBY	L
NORMAL	H

RN1901-T
R1=R2=4.7k

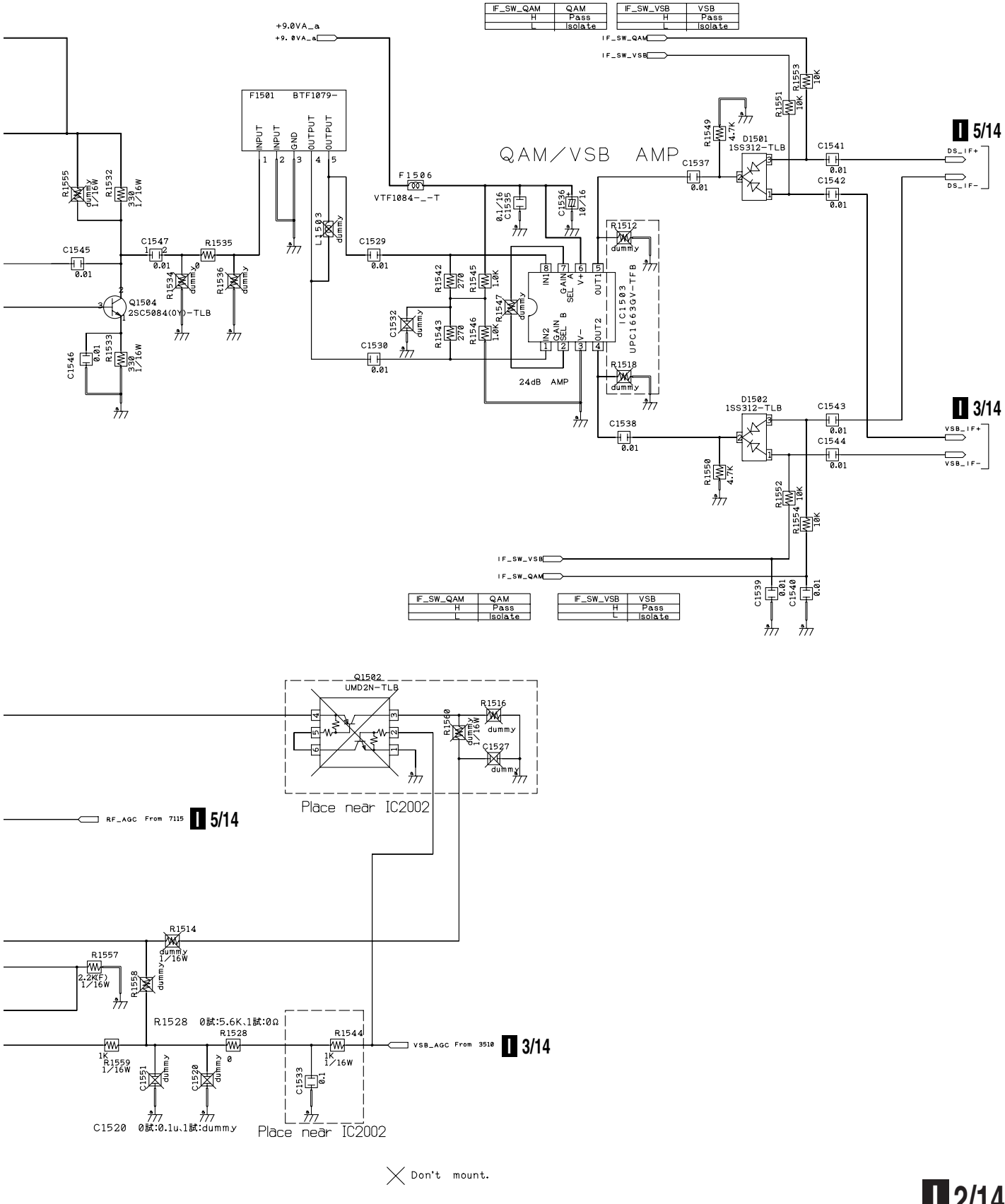
UMD2N-TLB
R1=R2=22k

3.27 TUNER BOARD ASSY (2/14)

2/14 DTV TUNER BOARD ASSY (AWE1300)



AGC_SW	IF_SW_QAM	IF_SW_VSB	AGC MODE
L	L	H	VSB
H	H	L	QAM

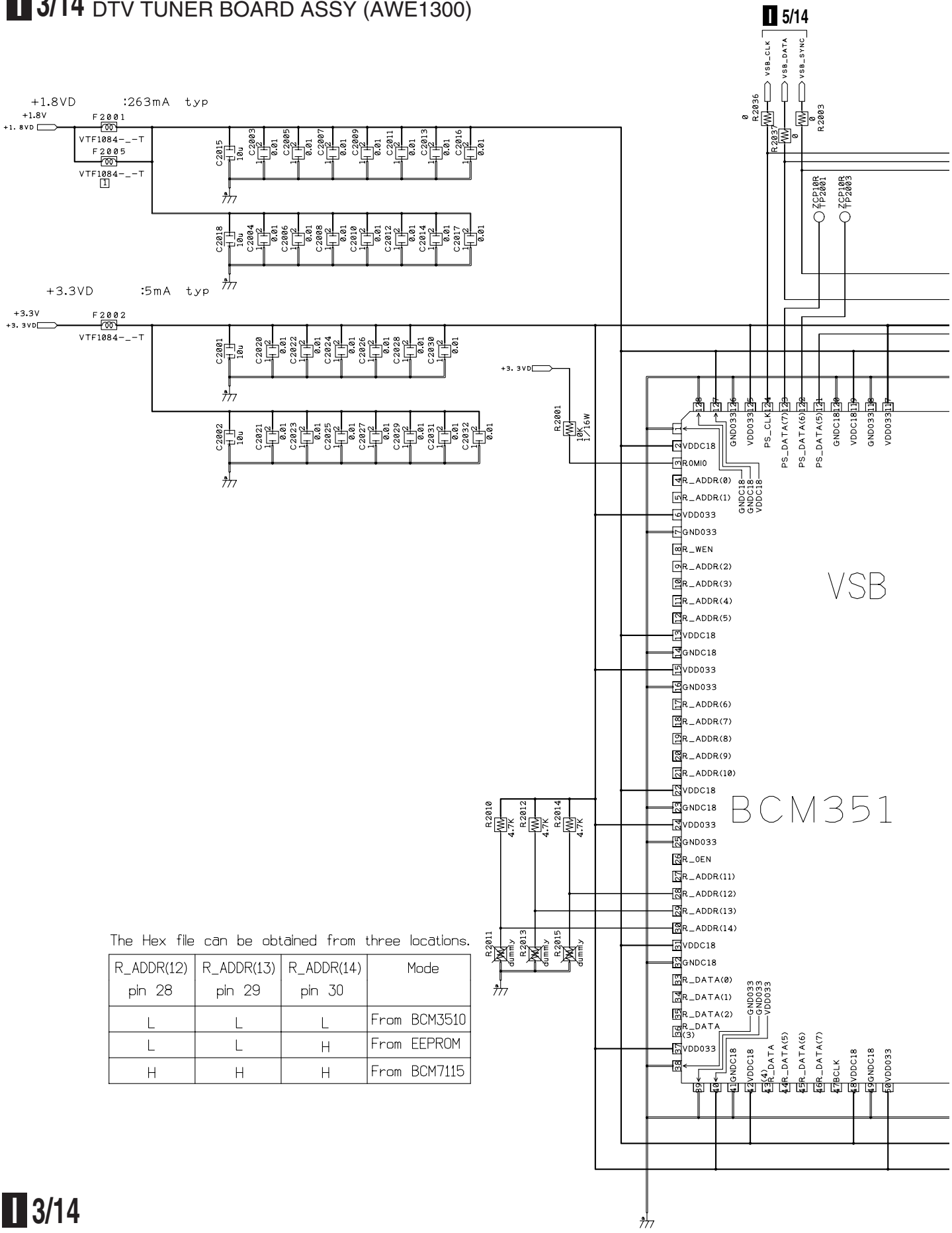


IF_SW_QAM	QAM
H	Pass
L	Isolate

IF_SW_VSB	VSB
H	Pass
L	Isolate

3.28 TUNER BOARD ASSY (3/14)

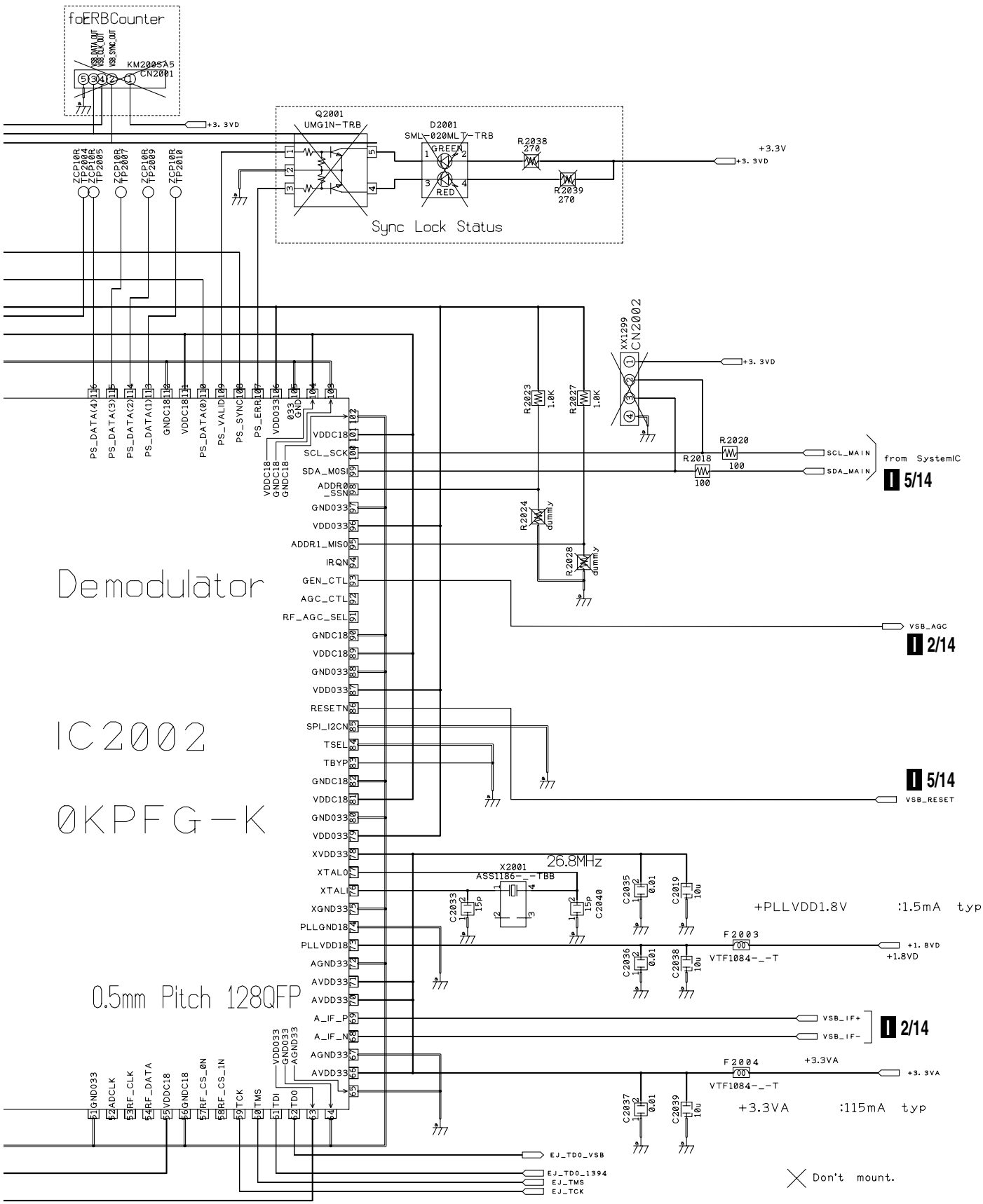
3/14 DTV TUNER BOARD ASSY (AWE1300)



The Hex file can be obtained from three locations.

R_ADDR(12) pin 28	R_ADDR(13) pin 29	R_ADDR(14) pin 30	Mode
L	L	L	From BCM3510
L	L	H	From EEPROM
H	H	H	From BCM7115

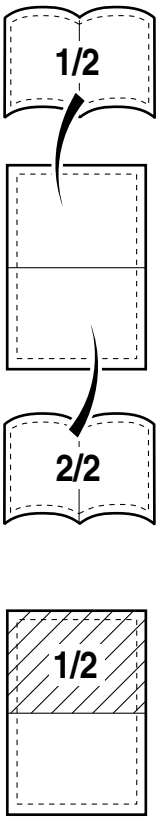
3/14

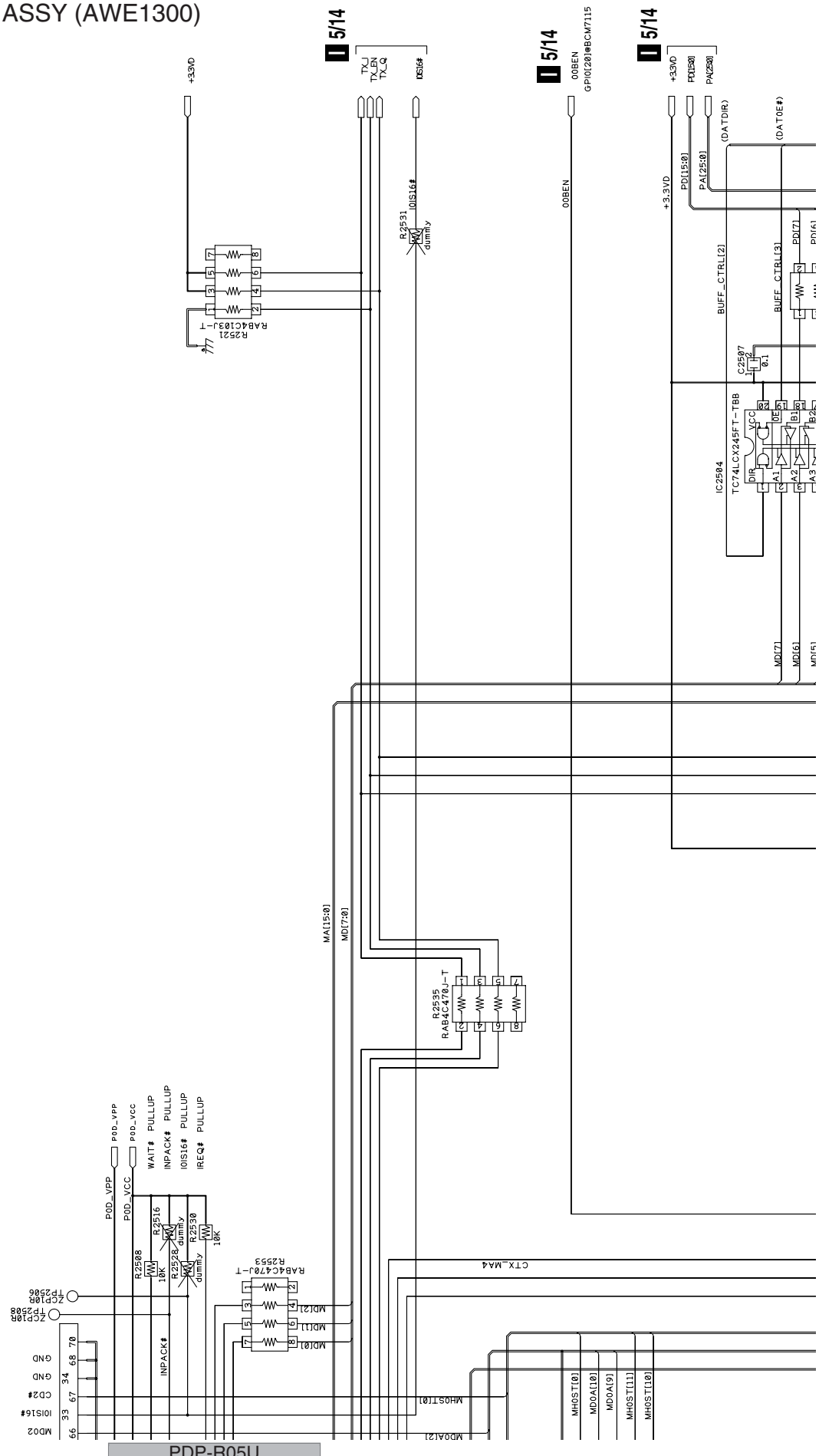

foERBCounter
KM200SA5
CN2001
+3.3V
Q2001
UMG1N-TRB
D2001
SML-020MLT-TRB
GREEN
RED
R2038
270
R2039
270
Sync Lock Status
XX1299
CN2002
R2023
1.0K
R2027
1.0K
R2020
100
R2018
100
SCL_MAIN
SDA_MAIN
from SystemIC
5/14
R2024
dummy
R2028
dummy
Demodulator
VSB_AGC
2/14
IC202
0KPFG-K
5/14
VSB_RESET
X2001
ASS1186--_-TBB
26.8MHz
+PLLVDD1.8V
:1.5mA typ
F2003
VTF1084--_-T
+1.8VD
+1.8VD
0.5mm Pitch 128QFP
VSB_IF+
VSB_IF-
2/14
F2004
VTF1084--_-T
+3.3VA
+3.3V
+3.3VA
:115mA typ
EJ_TDO_VSB
EJ_TDO_1394
EJ_TMS
EJ_TCK
Don't mount.
3/14

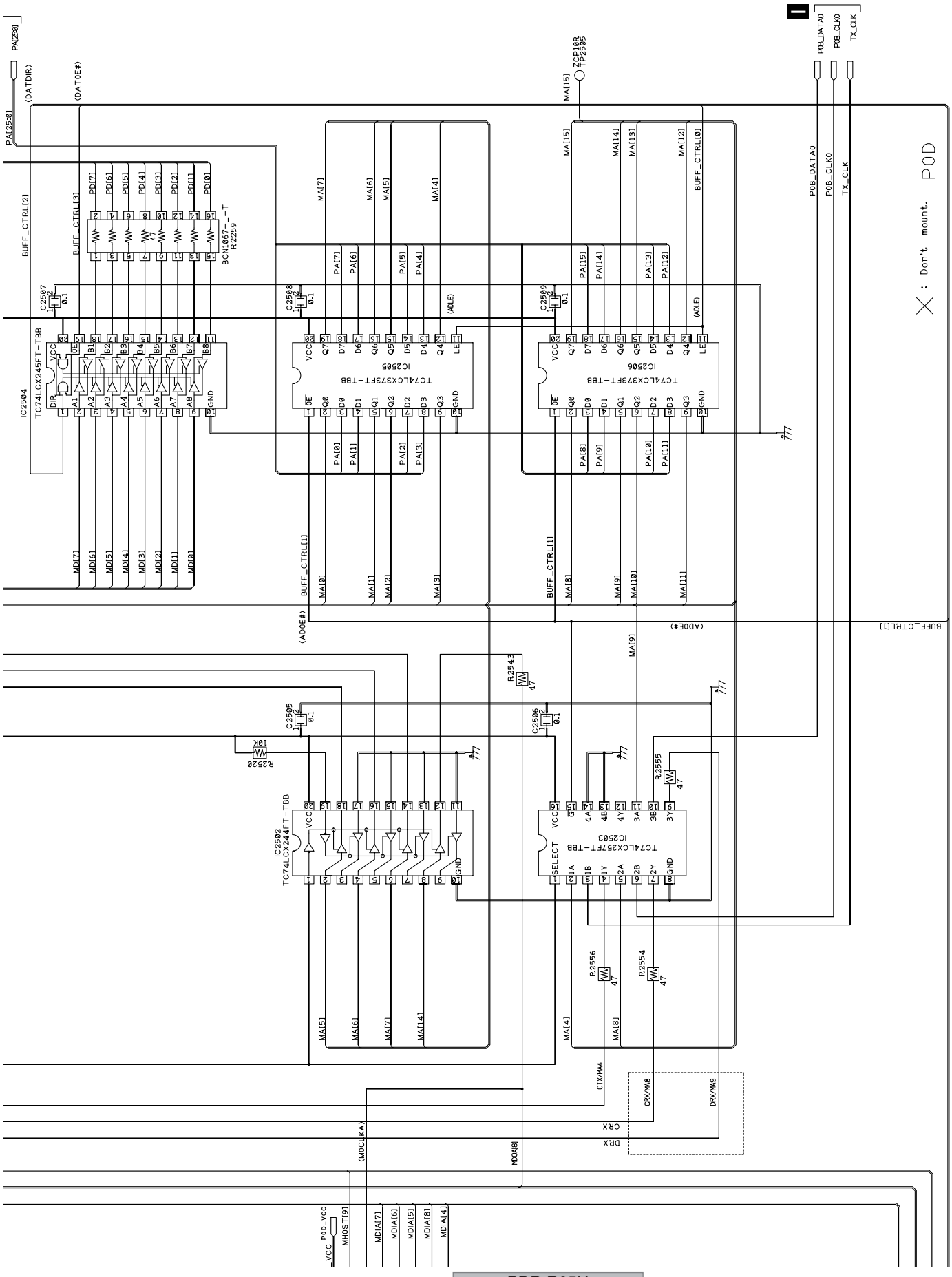
3.29 TUNER BOARD ASSY (4/14)

4/14 TUNER BOARD ASSY (AWE1300)

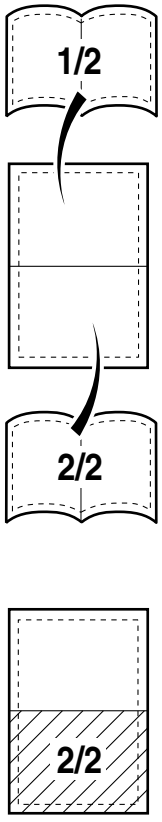
Large size SCH diagram



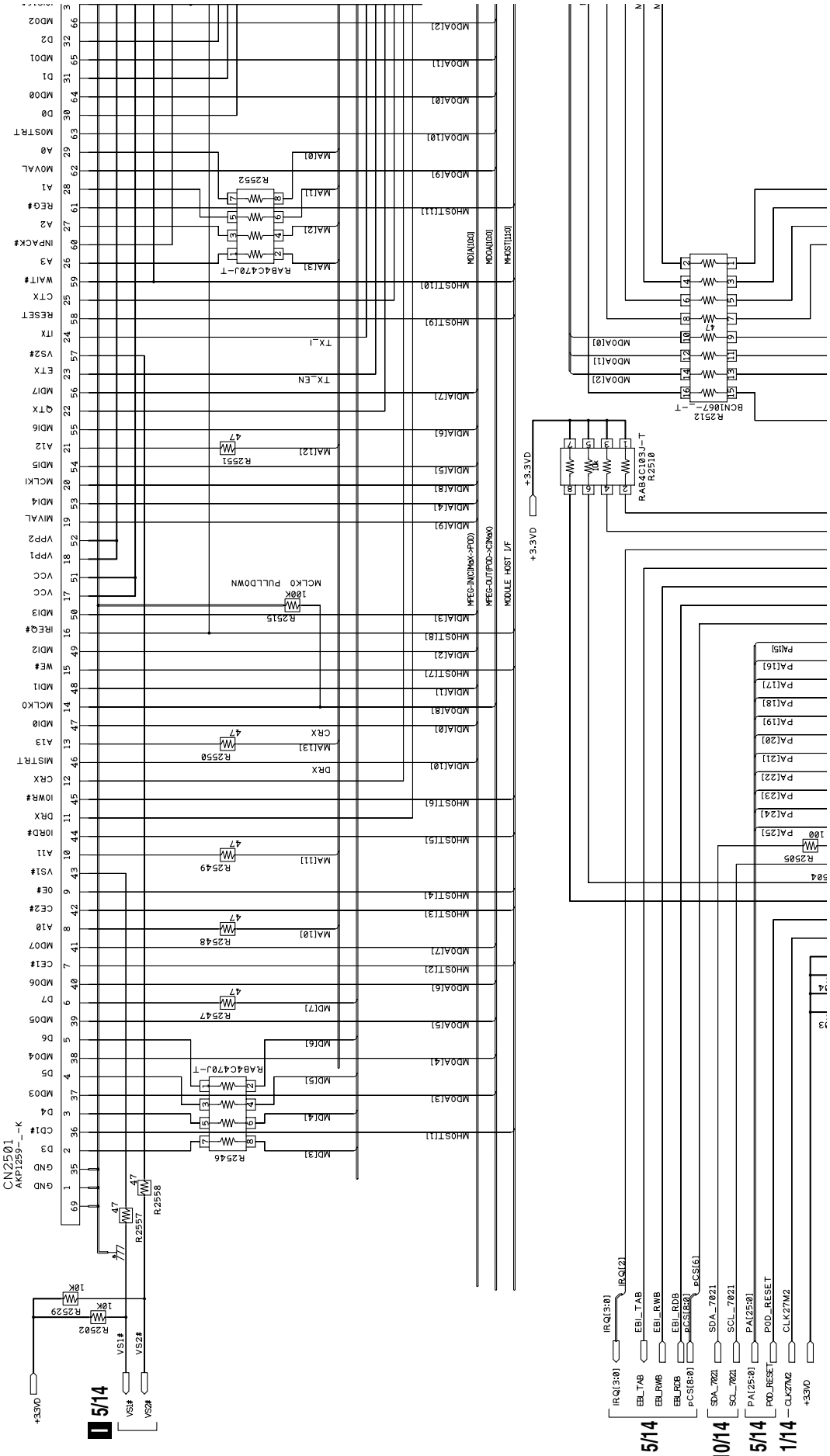


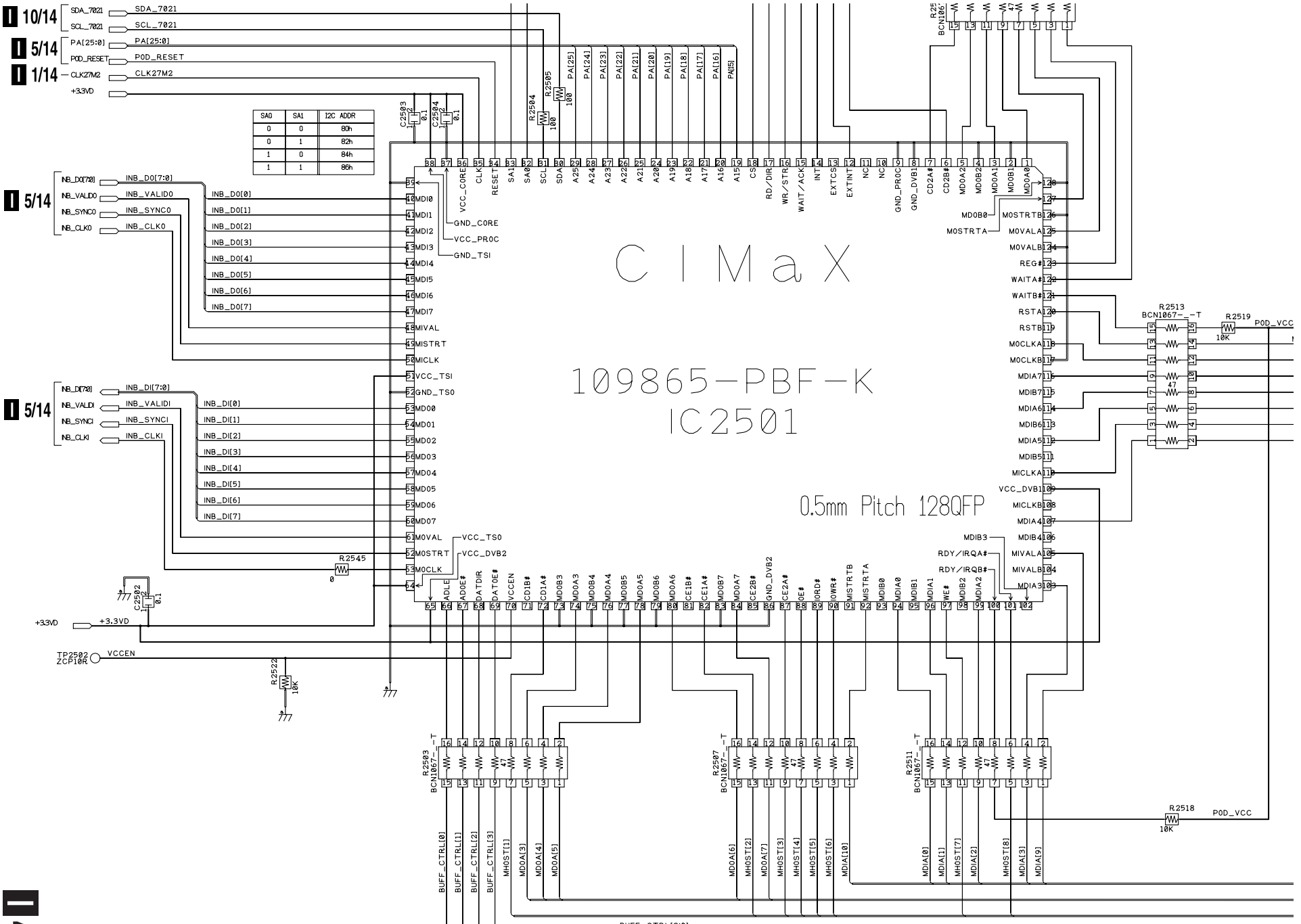

POD
X : Don't mount.
IC2504
TC74LCX245FT-TBB
IC2505
TC74LCX373FT-TBB
IC2506
TC74LCX373FT-TBB
IC2502
TC74LCX244FT-TBB
IC2503
TC74LCX257FT-TBB
BUFF_CTRL[2]
BUFF_CTRL[3]
BUFF_CTRL[1]
BUFF_CTRL[0]
PA[25:0]
(DATDIR)
(DATOE#)
(ADOE#)
(ADLE)
MA[15]
MA[14]
MA[13]
MA[12]
MA[7]
MA[6]
MA[5]
MA[4]
MA[0]
MA[1]
MA[2]
MA[3]
MA[8]
MA[9]
MA[10]
MA[11]
PA[7]
PA[6]
PA[5]
PA[4]
PA[15]
PA[14]
PA[13]
PA[12]
PA[0]
PA[1]
PA[2]
PA[3]
PA[8]
PA[9]
PA[10]
PA[11]
MDI[7]
MDI[6]
MDI[5]
MDI[4]
MDI[3]
MDI[2]
MDI[1]
MDI[0]
PDI[7]
PDI[6]
PDI[5]
PDI[4]
PDI[3]
PDI[2]
PDI[1]
PDI[0]
BCN1067__T
R2259
47
C2507
C2508
C2509
C2505
C2506
0.1
R2543
R2520
10K
R2555
R2556
R2554
POB_DATA0
POB_CLK0
TX_CLK
CTX/MA4
CRX/MA8
CRX
DRX
DRX/MA9
(MOCLKA)
MDDA[8]
VCC_POD_VCC
MHOST[9]
MDIA[7]
MDIA[6]
MDIA[5]
MDIA[8]
MDIA[4]

Large size SCH diagram



CIMaX=10[mA] (max)
Logic(x5)=25[mA]




10/14
SDA_7021
SCL_7021
5/14
PA[25:0]
P0D_RESET
1/14
CLK27M2
+3.3VD
SA0 SA1 I2C ADDR
0 0 80h
0 1 82h
1 0 84h
1 1 86h
5/14
INB_D0[7:0]
INB_VALID0
INB_SYNC0
INB_CLK0
5/14
INB_DI[7:0]
INB_VALIDI
INB_SYNCI
INB_CLKI
C I MaX
109865-PBF-K
IC2501
0.5mm Pitch 128QFP
VCC_CORE
GND_CORE
VCC_PROC
GND_TSI
VCC_TSI
GND_TS0
VCC_TS0
VCC_DVB2
GND_DVB2
GND_PROC
GND_DVB1
R2545
R2522
10K
TP2502
ZCP10R
VCCEN
R2513
BCN1067-__-T
R2519
10K
P0D_VCC
R2518
10K
R2503
BCN1067-__-T
R2507
BCN1067-__-T
R2511
BCN1067-__-T
BUFF_CTRL[3:0]
PDP-R05U
4/14
81

3.30 TUNER BOARD ASSY (5/14)

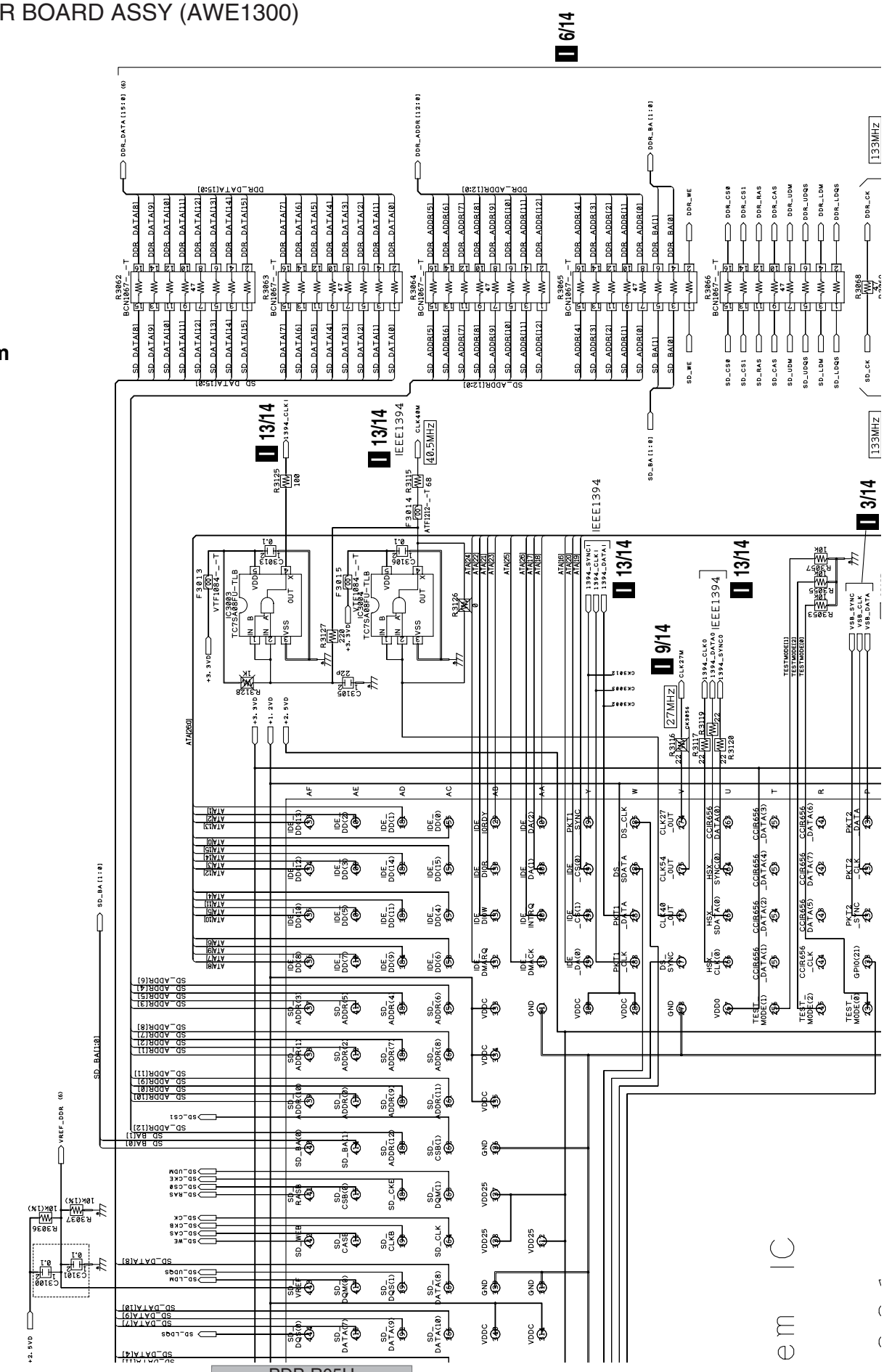
5/14 TUNER BOARD ASSY (AWE1300)

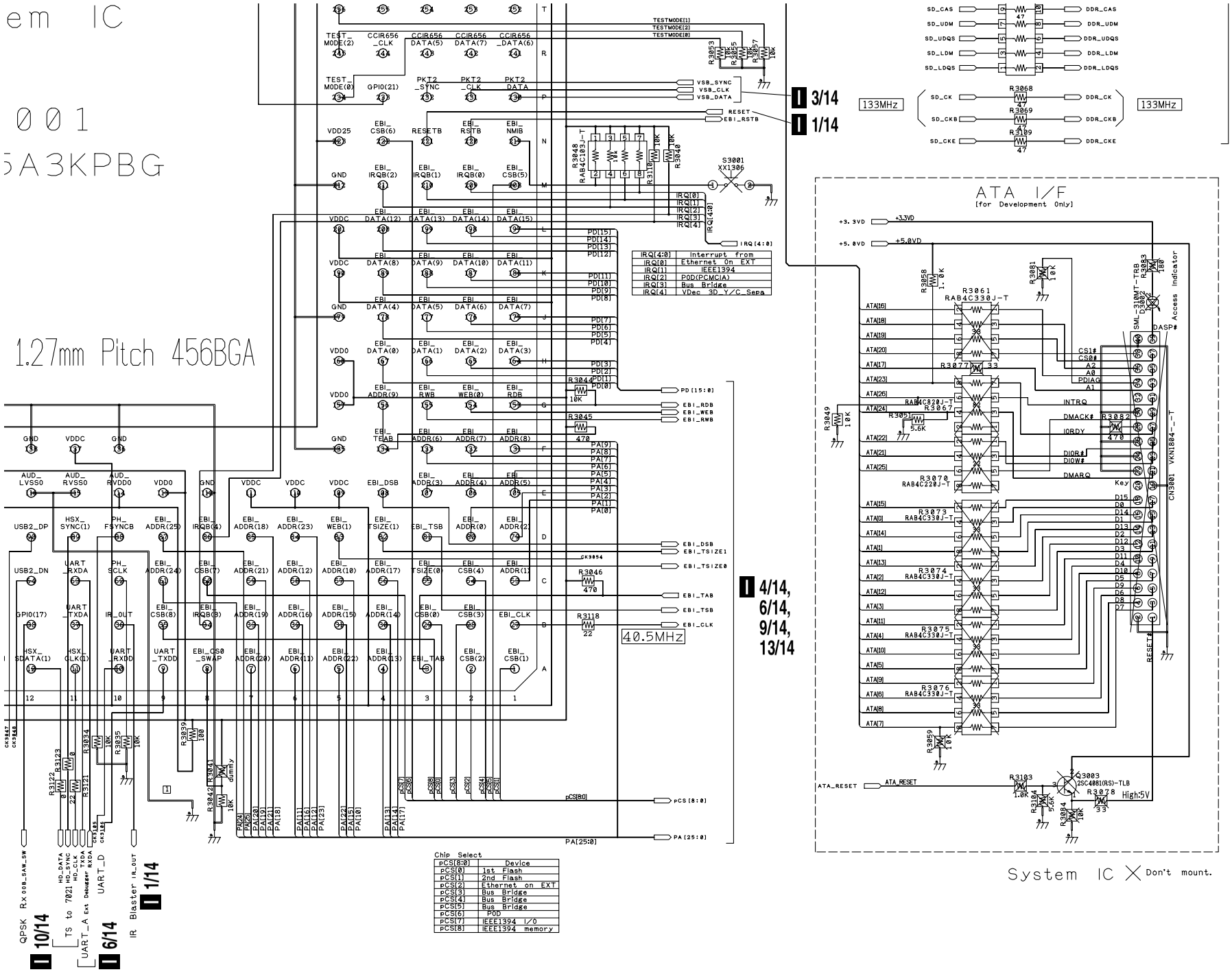
Large size SCH diagram

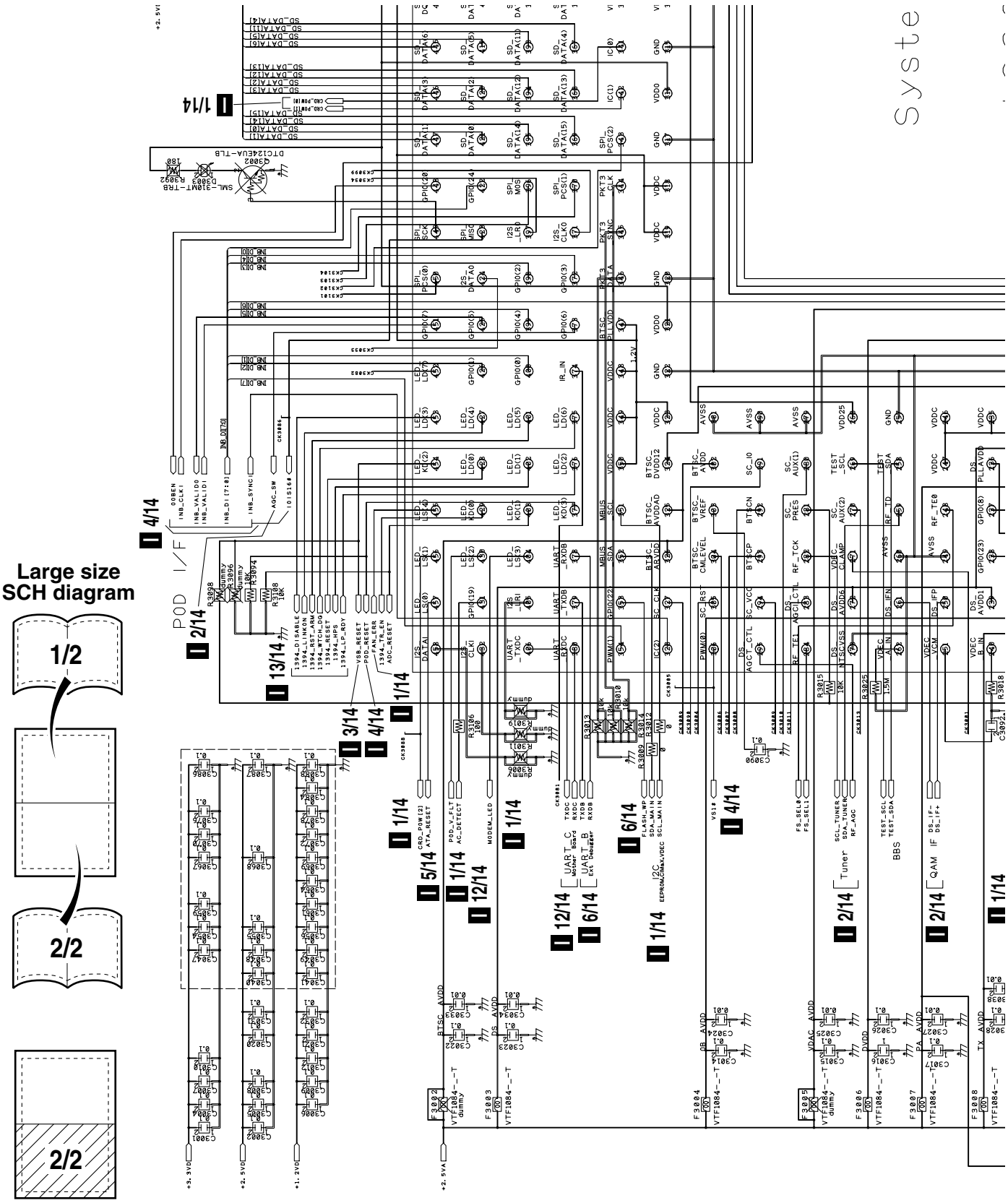
1/2

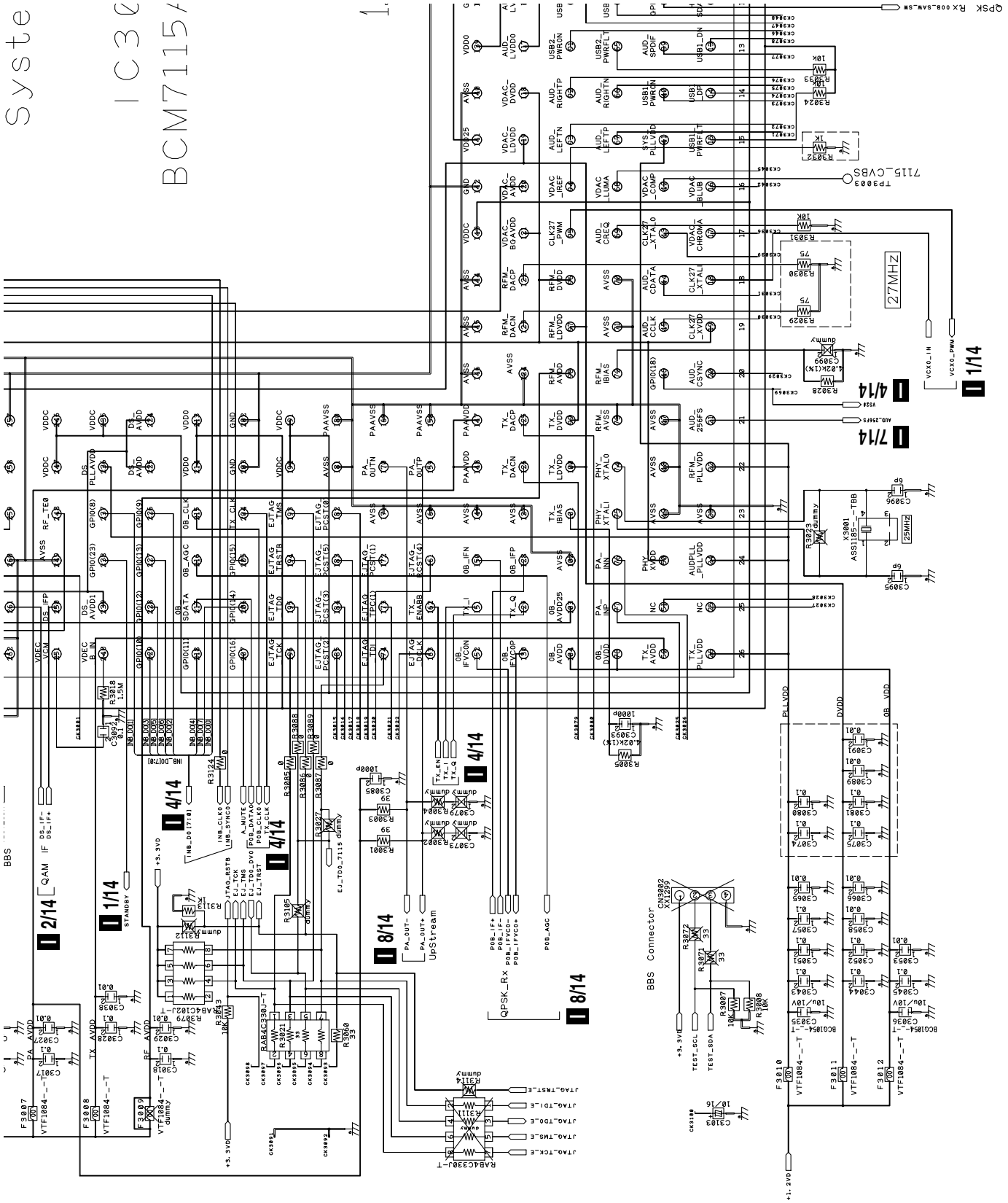
2/2

1/2




em IC
001
5A3KPBG
1.27mm Pitch 456BGA
PDP-R05U
1 3/14
1 1/14
1 4/14, 6/14, 9/14, 13/14
1 10/14
1 6/14
1 1/14
40.5MHz
133MHz
133MHz
ATA I/F
[for Development Only]
System IC
Don't mount.
Chip Select
pCS[8:0] Device
pCS(0) 1st Flash
pCS(1) 2nd Flash
pCS(2) Ethernet on EXT
pCS(3) Bus Bridge
pCS(4) Bus Bridge
pCS(5) Bus Bridge
pCS(6) POD
pCS(7) IEEE1394 I/O
pCS(8) IEEE1394 memory
IRQ[4:0] Interrupt from
IRQ(0) Ethernet On EXT
IRQ(1) IEEE1394
IRQ(2) POD(PCMCIA)
IRQ(3) Bus Bridge
IRQ(4) VDec 3D Y/C Sepa

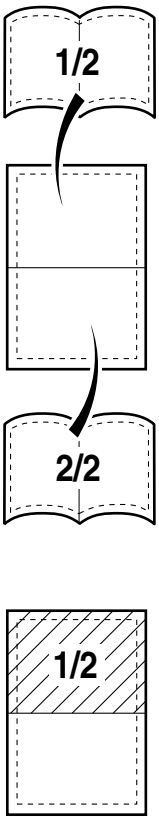

Large size
SCH diagram
1/2
2/2
2/2
1/14
4/14
2/14
13/14
1/14
3/14
4/14
1/14
5/14
1/14
12/14
12/14
6/14
1/14
6/14
4/14
2/14
2/14
1/14
5/14
POD I/F
UART_C
UART_B
I2C
Tuner
QAM IF
BBS

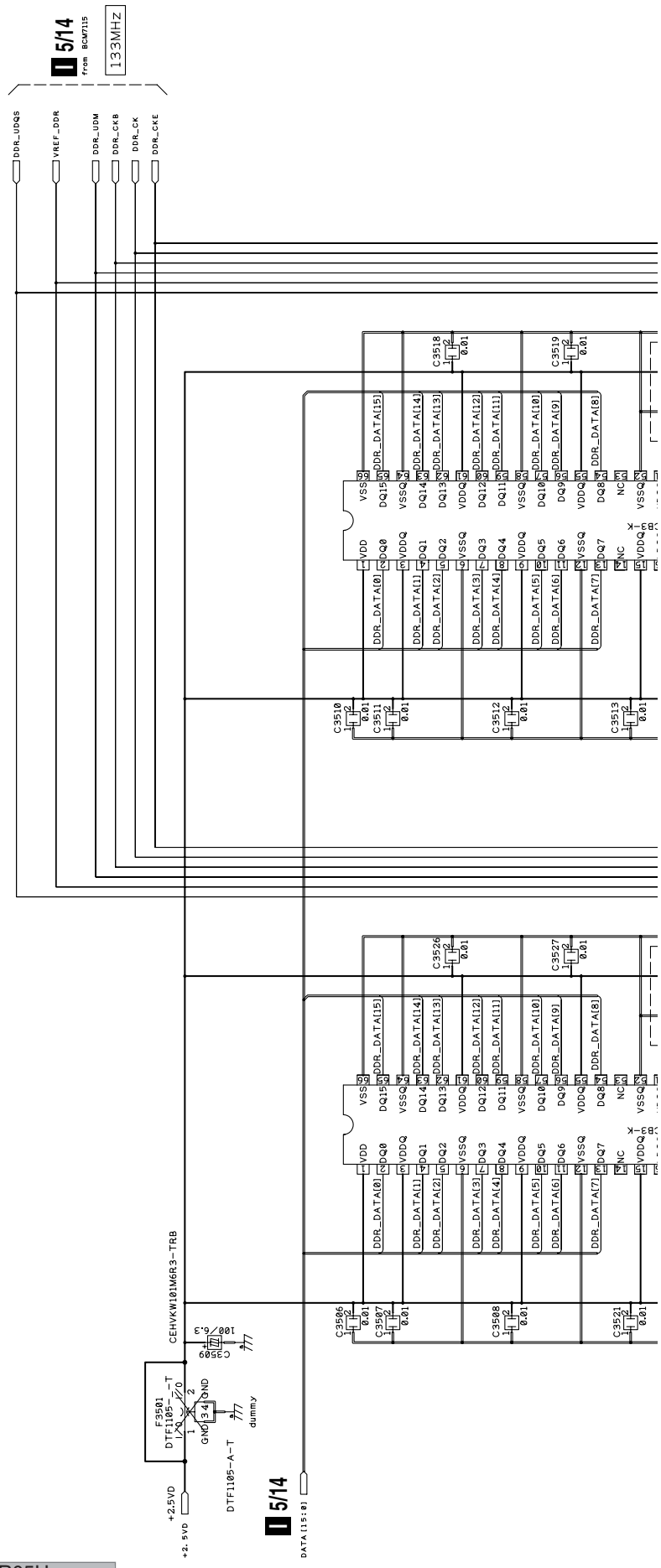

Syste
IC36
BCM7115
5
6
7
8
A
B
C
D
E
F
QAM IF
2/14
1/14
STANDBY
4/14
8/14
UpStream
QPSK_Rx
BBS Connector
27MHZ
7115_CVBS
QPSK Rx 008-SAW-SW
4/14
7/14
1/14
8/14
5/14
PDP-R05U
85

3.31 TUNER BOARD ASSY (6/14)

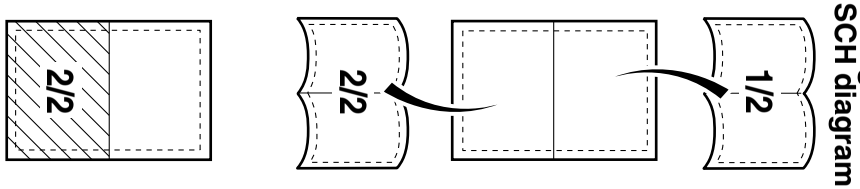
6/14 TUNER BOARD ASSY (AWE1300)

Large size SCH diagram





R3540
121(1%)
C3520
dummy
CCSRCH5R0C50-T
C3519
0.01
C3517
0.1
C3516
0.1
Keep near C3505
IC3505
K4H561638F-UCB3-K
DDR_DATA[10]
DDR_DATA[9]
DDR_DATA[8]
DDR_ADDR[12]
DDR_ADDR[11]
DDR_ADDR[9]
DDR_ADDR[8]
DDR_ADDR[7]
DDR_ADDR[6]
DDR_ADDR[5]
DDR_ADDR[4]
DDR_DATA[5]
DDR_DATA[6]
DDR_DATA[7]
DDR_BA[0]
DDR_BA[1]
DDR_ADDR[10]
DDR_ADDR[0]
DDR_ADDR[1]
DDR_ADDR[2]
DDR_ADDR[3]
C3513
0.01
C3514
0.01
C3515
0.01
Don't mount.
R3521
121(1%)
C3528
dummy
CCSRCH5R0C50-T
C3527
0.01
C3525
0.1
C3524
0.1
Keep near C3501
IC3501
K4H561638F-UCB3-K
C3521
0.01
C3522
0.01
C3523
0.01
DDR_ADDR[12:0]
DDR_BA[1:0]
DDR_LDQS
DDR_LDM
DDR_WE
DDR_CAS
DDR_RAS
DDR_CS0
DDR_CS1
Signal
POWER SUPPLY
POWER SUPPLY
GROUND
from BCM7115
5/14

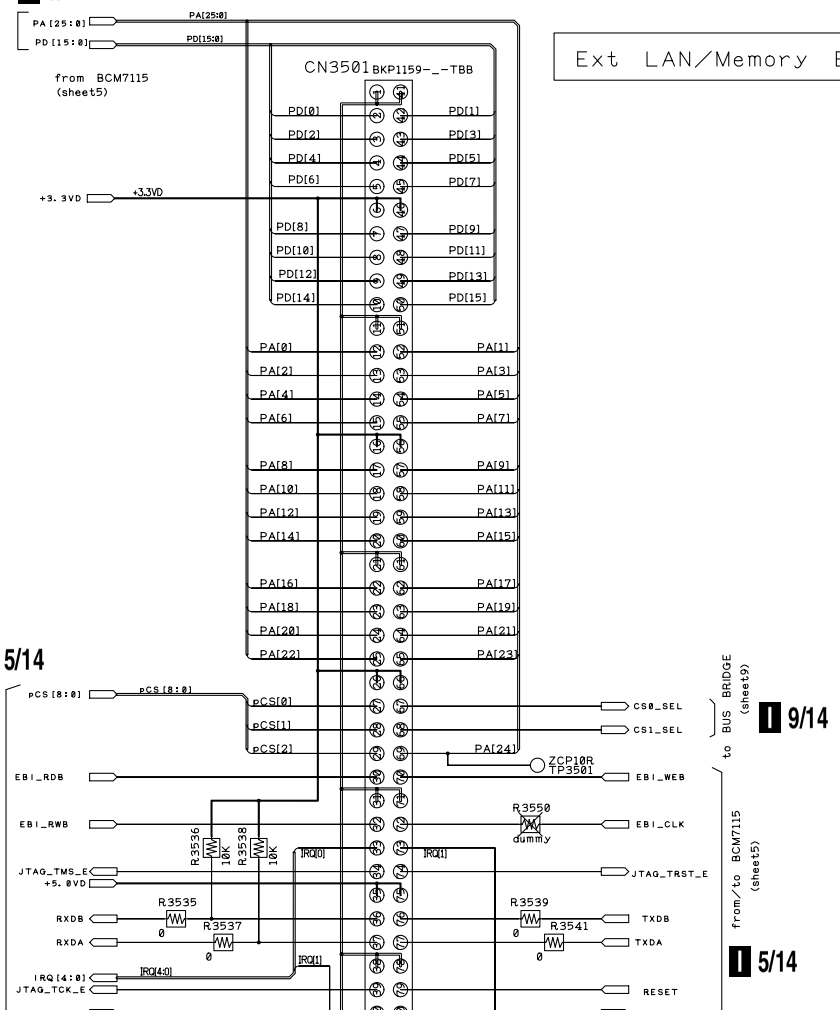


Large size SCH diagram

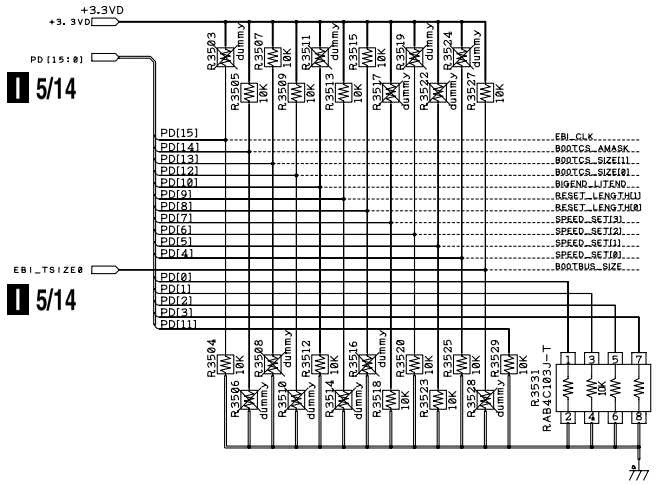
(max)
Flash=80[mA],50[mA](typ)
@Program,Elase
DDR(×2)=600[mA]@IDD7A

5/14

Ext LAN/Memory Board



BCM7115 Configration



BOOTCS_SIZE[1:0]	
00	64MB
01	16MB
10	8MB
11	4MB

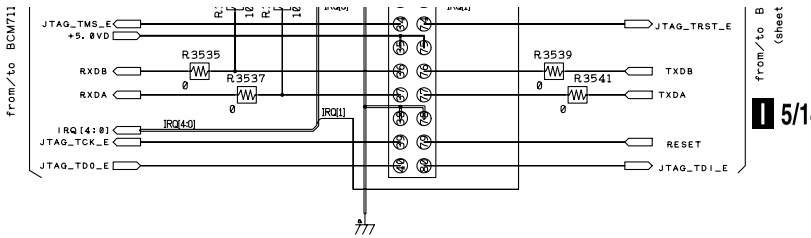
RESET_LENGTH[1:0]	
00	−3usec
01	−50usec
10	−100usec
11	−200usec

EBI_CLK	MHz
H	27
L	40.5

BOOTBUS_SIZE	bit
H	16
L	8

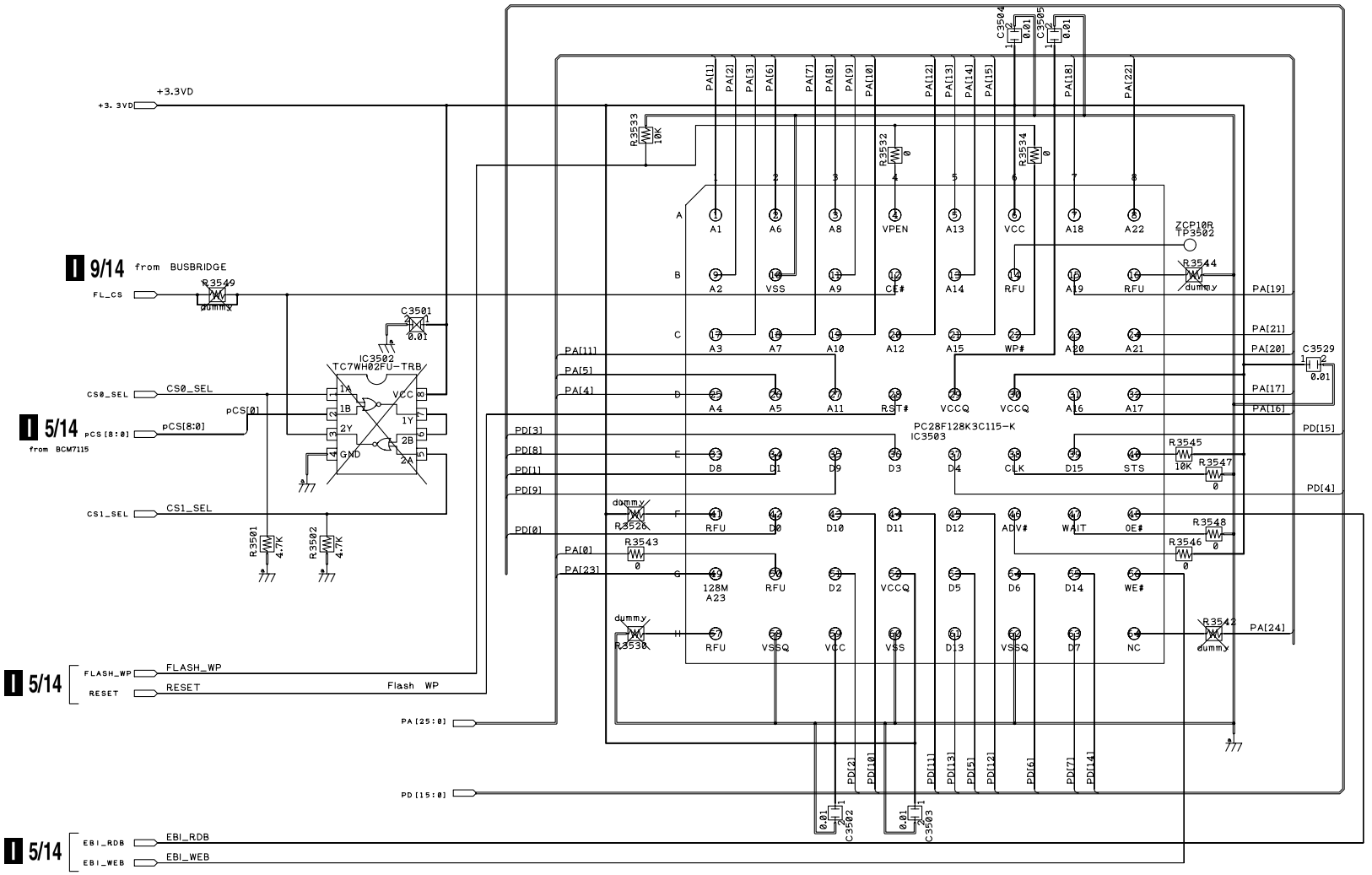
+2.5\

DDR_DATA



Flash on 7115_EBI
128Mbit (EasyBGA)

Address A23 is valid only on 128-Mbit desities and above; otherwise, it is a no connect(NC).
Address A24 is valid only on 256-Mbit density; otherwise, it is a no connect(NC).



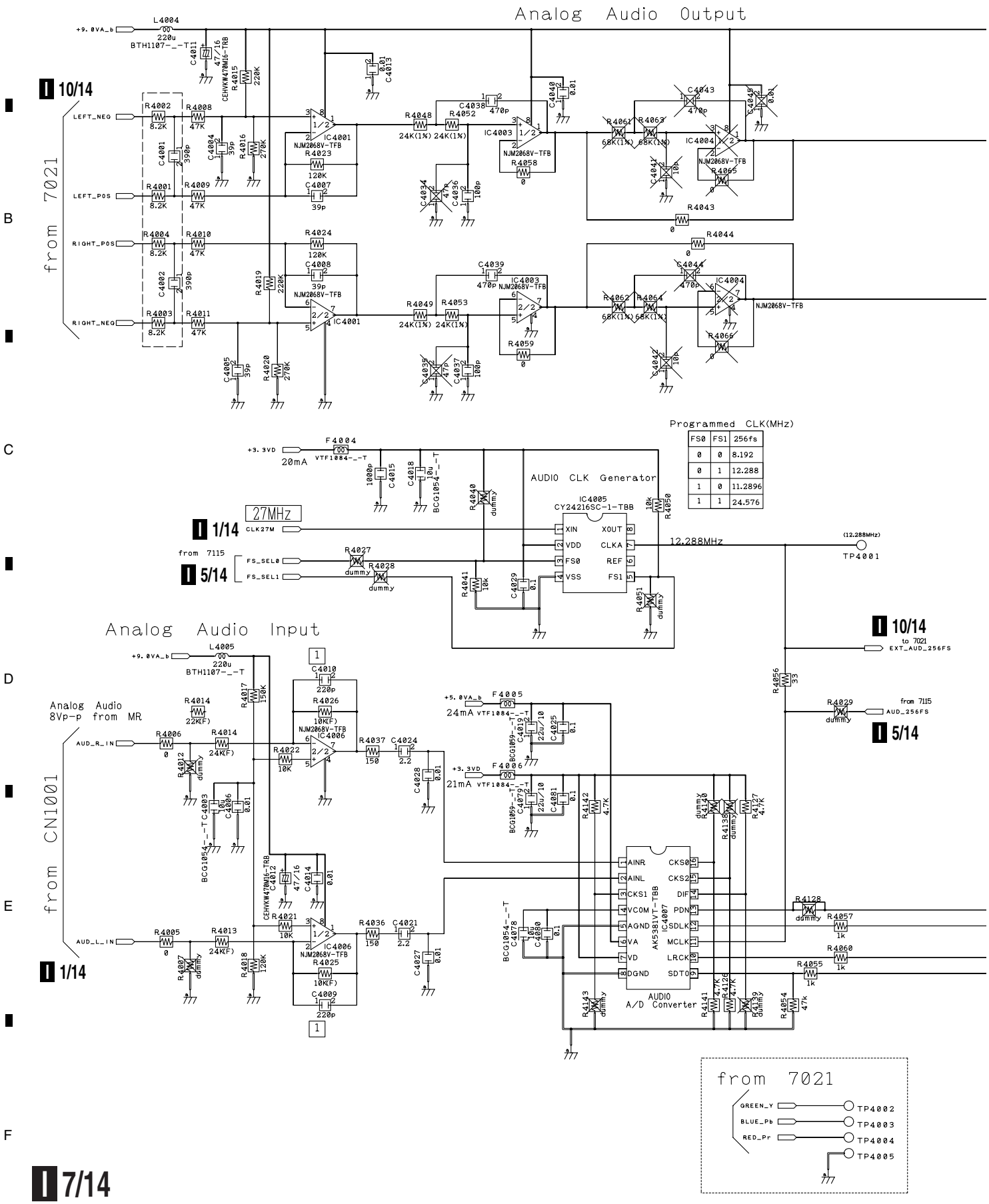
28F128K3C Power Sig

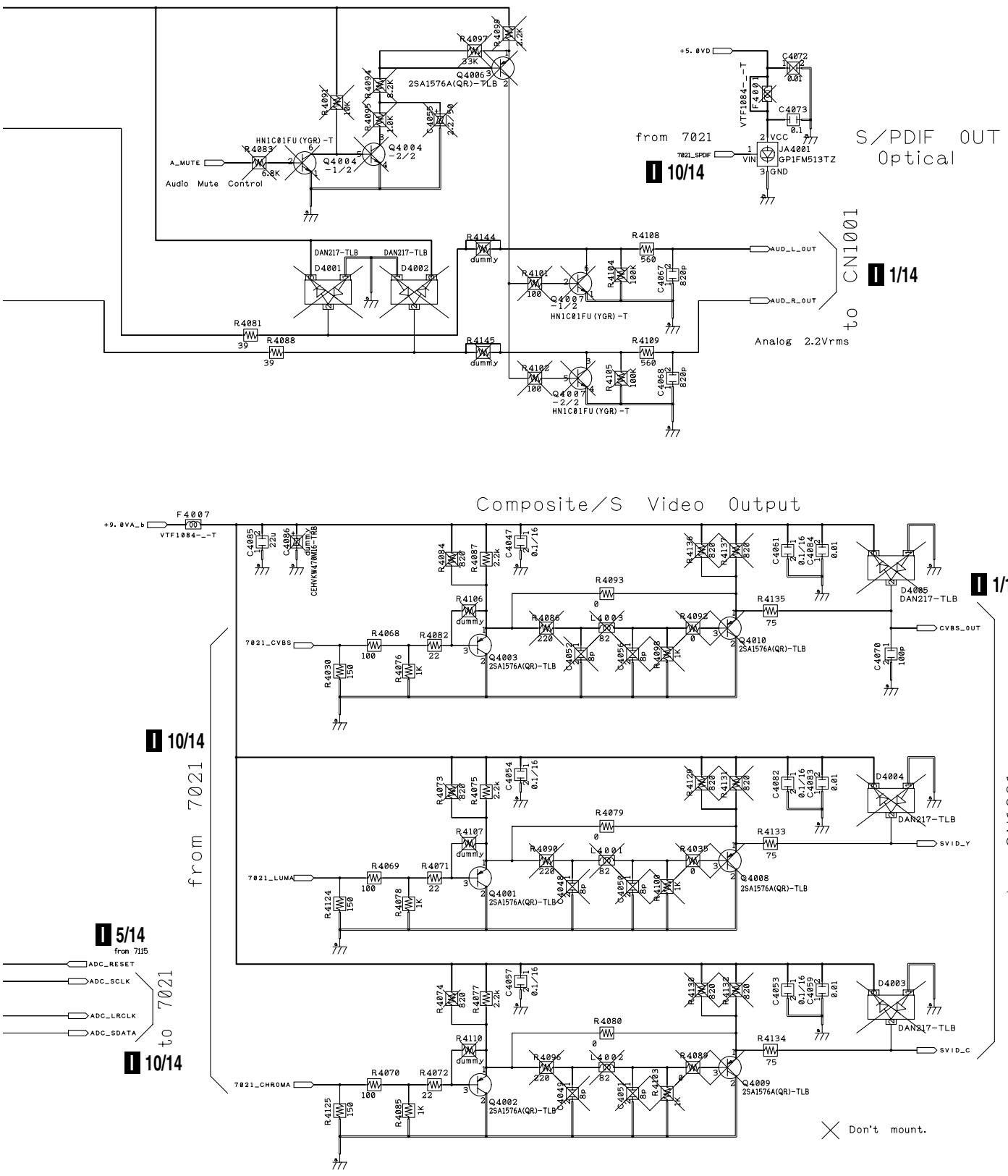
VCC	CORE POWER
VCCQ	I/O POWER
VSS	GROUND
VSSQ	I/O GROUND

from BCM7115 5/14

3.32 TUNER BOARD ASSY (7/14)

7/14 DTV TUNER BOARD ASSY (AWE1300)

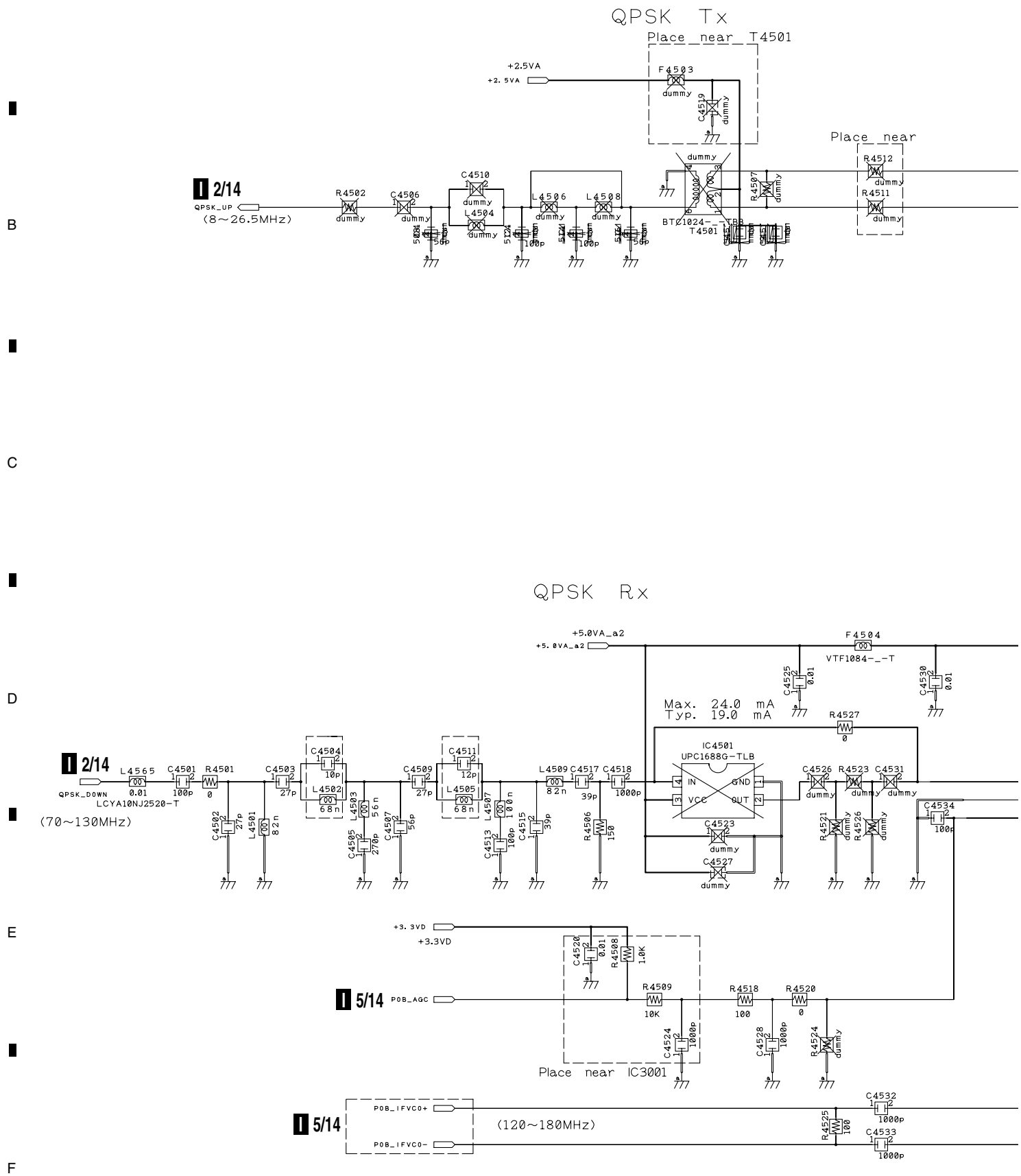




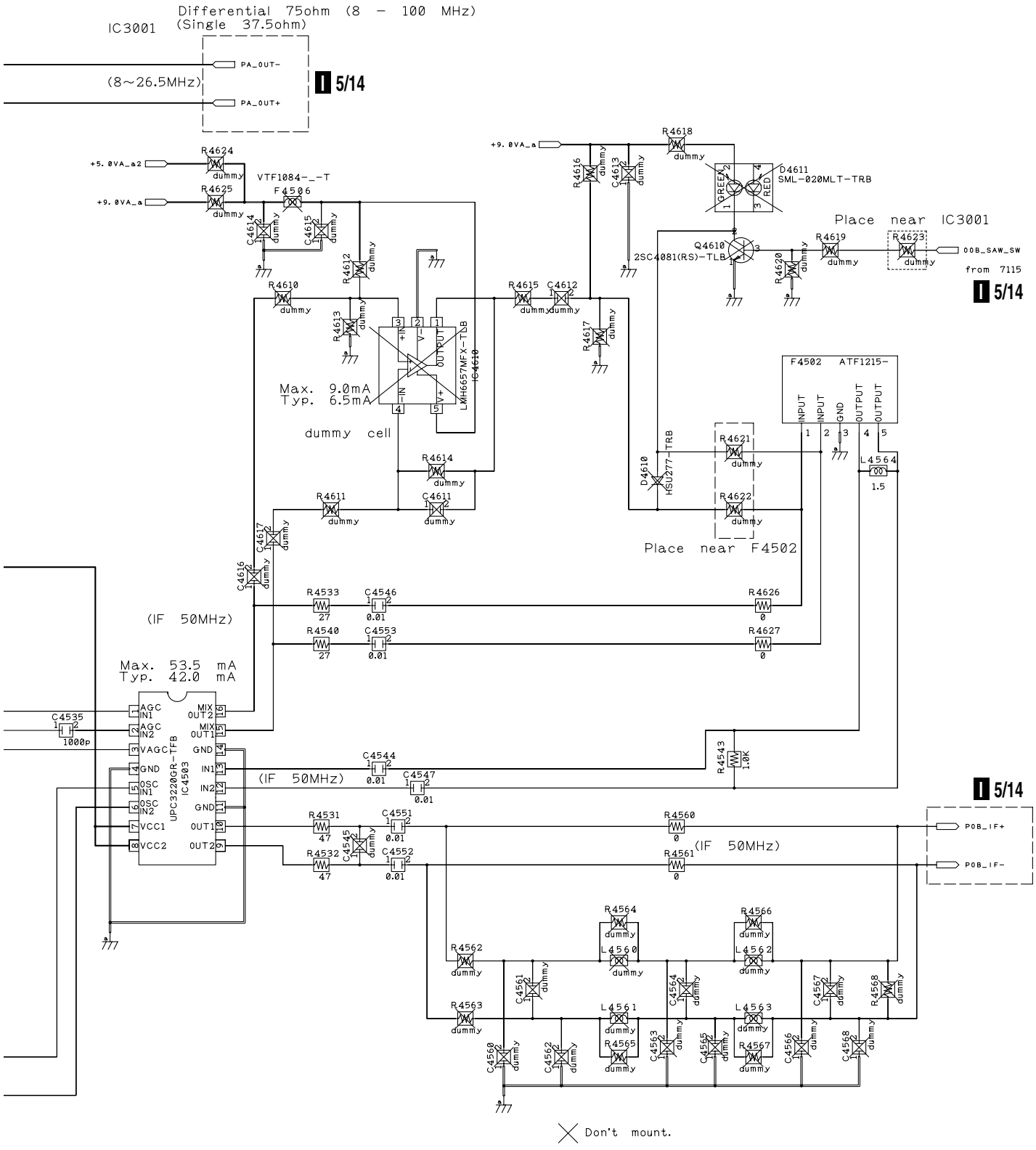
10/14
1/14
5/14
10/14
1/14
10/14
7/14

3.33 TUNER BOARD ASSY (8/14)

8/14 DTV TUNER BOARD ASSY (AWE1300)



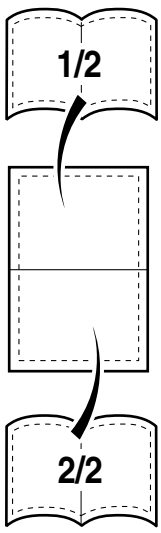
8/14

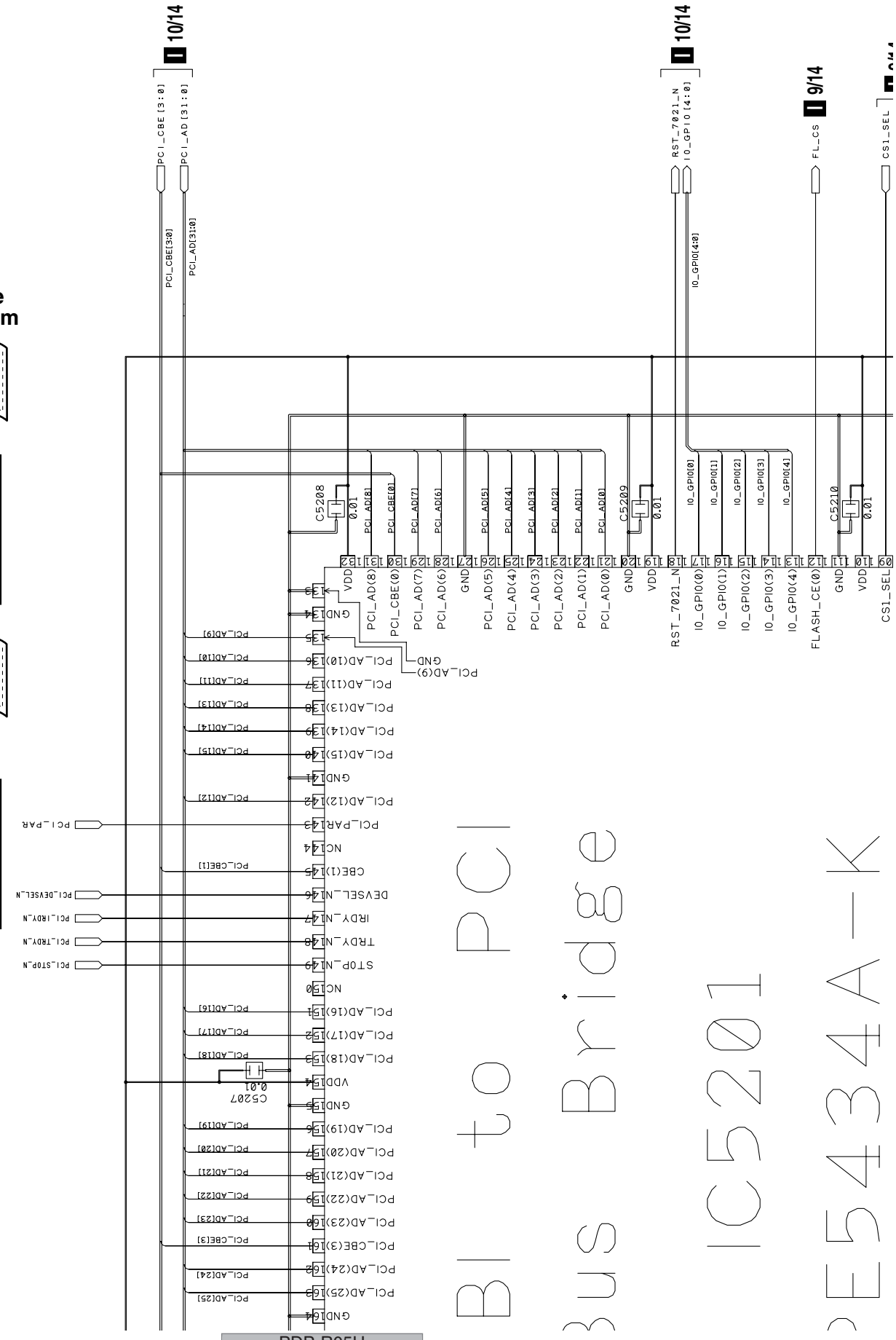

Differential 75ohm (8 - 100 MHz)
(Single 37.5ohm)
IC3001
PA_OUT-
(8~26.5MHz)
PA_OUT+
5/14
+5.0VA_a2
+9.0VA_a
R4624
dummy
R4625
dummy
VTF1084-_-T
F4506
C4614
C4615
R4612
R4610
R4613
R4615
C4612
R4617
IC4610
LMH6657MFX-TLB
+IN
-IN
V-
V+
OUTPUT
Max. 9.0mA
Typ. 6.5mA
dummy cell
R4614
R4611
C4611
C4617
C4616
R4618
R4616
C4613
D4611
SML-020MLT-TRB
GREEN
RED
Q4610
2SC4081(RS)-TLB
R4619
R4620
R4623
Place near IC3001
00B_SAW_SW
from 7115
5/14
F4502 ATF1215-
INPUT
INPUT
GND
OUTPUT
OUTPUT
R4621
R4622
D4610
HSU277-TRB
L4564
1.5
Place near F4502
R4533
C4546
0.01
R4626
R4540
C4553
0.01
R4627
(IF 50MHz)
Max. 53.5 mA
Typ. 42.0 mA
C4535
1000P
AGC IN1
AGC IN2
VAGC
GND
OSC IN1
OSC IN2
VCC1
VCC2
MIX OUT2
MIX OUT1
GND
IN1
IN2
GND
OUT1
OUT2
UPC3220GR-TFB
IC4503
C4544
C4547
0.01
R4543
1.0K
(IF 50MHz)
5/14
R4531
C4551
R4532
C4552
C4545
47
0.01
R4560
R4561
(IF 50MHz)
P0B_IF+
P0B_IF-
R4564
L4560
R4566
L4562
R4562
C4561
C4564
C4567
R4568
R4563
L4561
L4563
C4560
C4562
R4565
C4563
C4565
R4567
C4566
C4568
Don't mount.
8/14

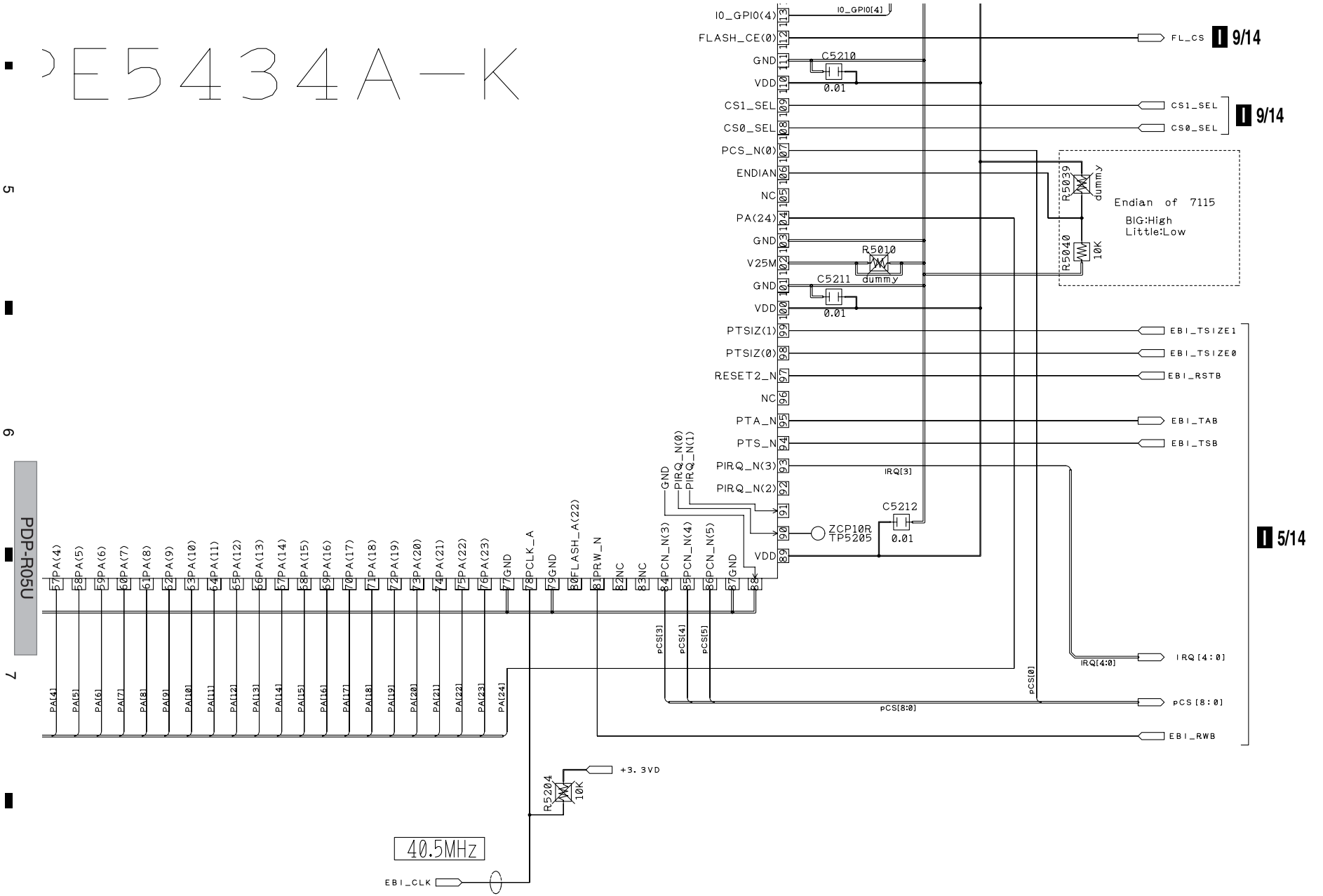
3.34 TUNER BOARD ASSY (9/14)

9/14 TUNER BOARD ASSY (AWE1300)

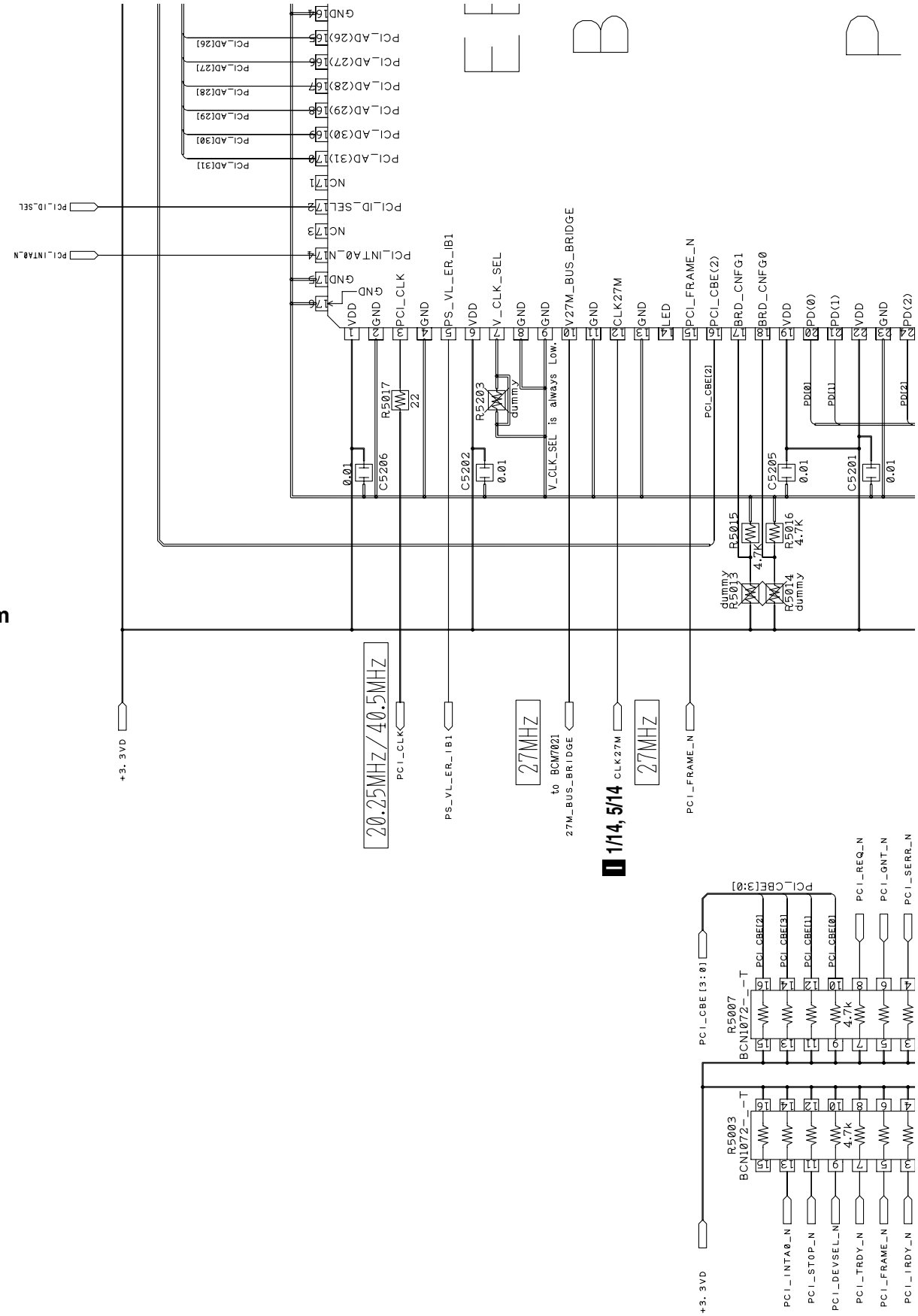
Large size SCH diagram



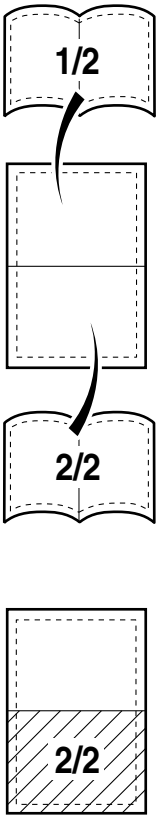


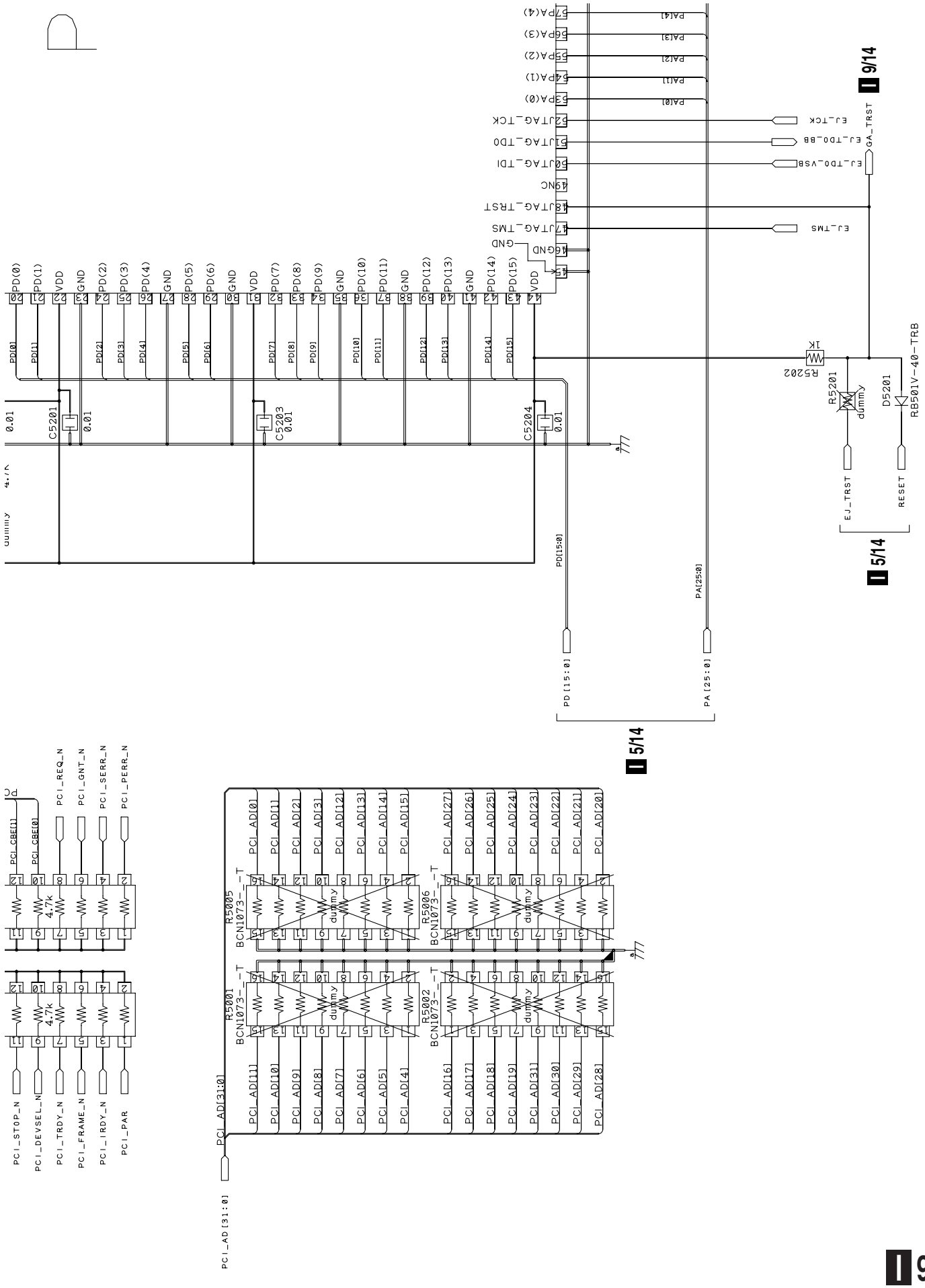

IO_GPIO(4)
FLASH_CE(0)
GND
VDD
CS1_SEL
CS0_SEL
PCS_N(0)
ENDIAN
NC
PA(24)
GND
V25M
GND
VDD
PTSIZ(1)
PTSIZ(0)
RESET2_N
NC
PTA_N
PTS_N
PIRQ_N(3)
PIRQ_N(2)
VDD
FL_CS
CS1_SEL
CS0_SEL
EBI_TSIZE1
EBI_TSIZE0
EBI_RSTB
EBI_TAB
EBI_TSB
IRQ[4:0]
pCS[8:0]
EBI_RWB
C5210
0.01
R5010
C5211 dummy
0.01
R5039 dummy
R5040 10K
Endian of 7115
BIG:High
Little:Low
C5212
0.01
ZCP10R
TP5205
IRQ[3]
IRQ[4:0]
pCS[0]
pCS[8:0]
9/14
9/14
5/14
PA[4]
PA[5]
PA[6]
PA[7]
PA[8]
PA[9]
PA[10]
PA[11]
PA[12]
PA[13]
PA[14]
PA[15]
PA[16]
PA[17]
PA[18]
PA[19]
PA[20]
PA[21]
PA[22]
PA[23]
PA[24]
FLASH_A(22)
PRW_N
PCN_N(3)
PCN_N(4)
PCN_N(5)
pCS[3]
pCS[4]
pCS[5]
PCLK_A
R5204 10K
+3.3VD
40.5MHz
EBI_CLK

PDP-R05U



Large size SCH diagram

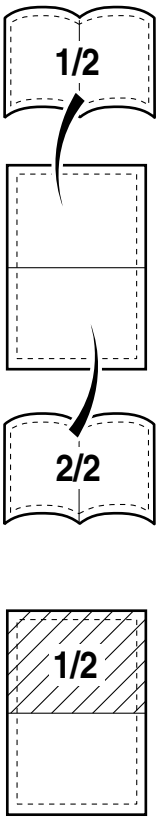


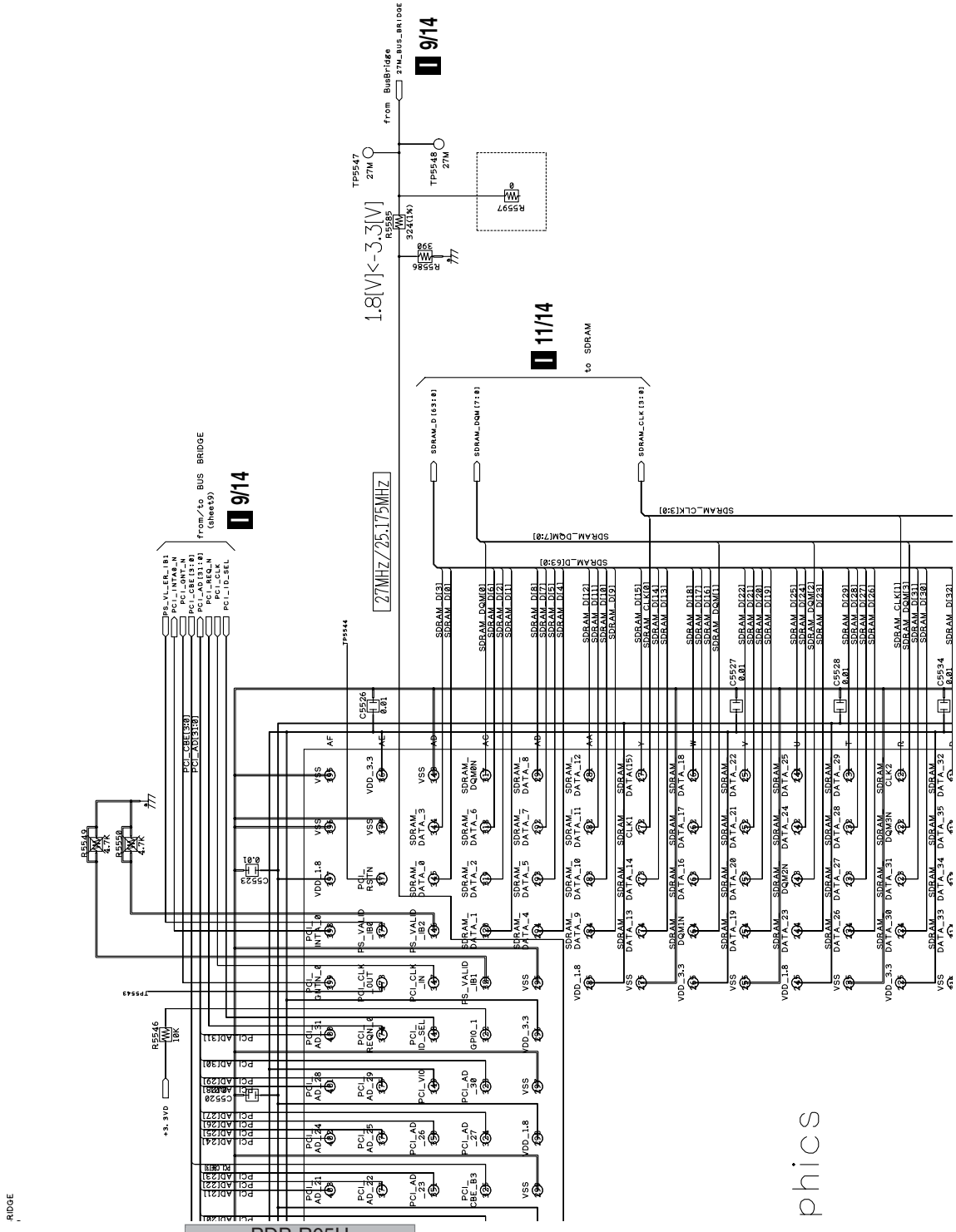

PD[0]
PD[1]
VDD
GND
PD[2]
PD[3]
PD[4]
PD[5]
PD[6]
PD[7]
PD[8]
PD[9]
PD[10]
PD[11]
PD[12]
PD[13]
PD[14]
PD[15]
C5201
C5203
C5204
0.01
PA[0]
PA[1]
PA[2]
PA[3]
PA[4]
PA(0)
PA(1)
PA(2)
PA(3)
PA(4)
JTAG_TDI
JTAG_TDO
JTAG_TCK
JTAG_TMS
JTAG_TRST
NC
EJ_TCK
EJ_TDO_BB
EJ_TDO_VSB
EJ_TMS
GA_TRST
R5202
1K
R5201
dummy
D5201
RB501V-40-TRB
EJ_TRST
RESET
9/14
5/14
PD[15:0]
PA[25:0]
PD [15:0]
PA [25:0]
PCI_CBE[1]
PCI_CBE[0]
PCI_REQ_N
PCI_GNT_N
PCI_SERR_N
PCI_PERR_N
4.7k
PCI_STOP_N
PCI_DEVSEL_N
PCI_TRDY_N
PCI_FRAME_N
PCI_IRDY_N
PCI_PAR
R5005
R5006
R5001
R5002
BCN1073-_-T
dummy
PCI_AD[31:0]
PCI_AD[0]
PCI_AD[1]
PCI_AD[2]
PCI_AD[3]
PCI_AD[4]
PCI_AD[5]
PCI_AD[6]
PCI_AD[7]
PCI_AD[8]
PCI_AD[9]
PCI_AD[10]
PCI_AD[11]
PCI_AD[12]
PCI_AD[13]
PCI_AD[14]
PCI_AD[15]
PCI_AD[16]
PCI_AD[17]
PCI_AD[18]
PCI_AD[19]
PCI_AD[20]
PCI_AD[21]
PCI_AD[22]
PCI_AD[23]
PCI_AD[24]
PCI_AD[25]
PCI_AD[26]
PCI_AD[27]
PCI_AD[28]
PCI_AD[29]
PCI_AD[30]
PCI_AD[31]

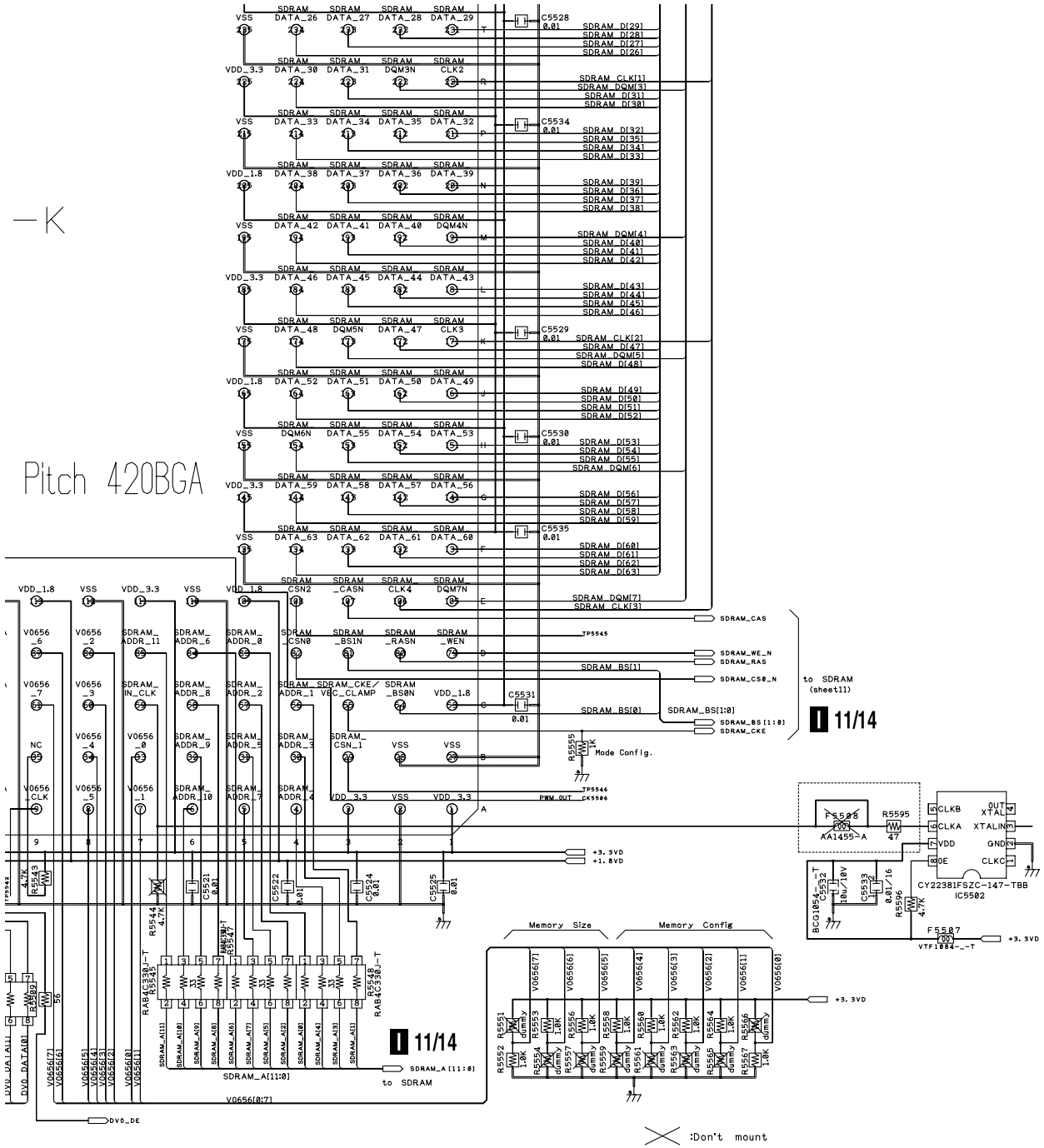
3.35 TUNER BOARD ASSY (10/14)

10/14 TUNER BOARD ASSY (AWE1300)

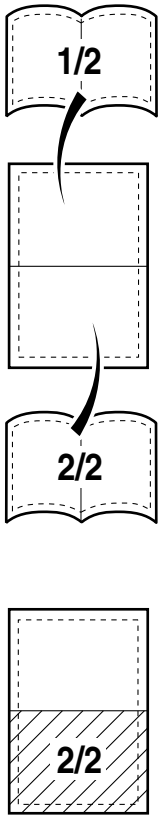
Large size SCH diagram






Pitch 420BGA
PDP-R05U
11/14
11/14
to SDRAM (sheet11)
to SDRAM
Mode Config.
Memory Size
Memory Config
:Don't mount
CY22381FSZC-147-TBB
IC5502
SDRAM_A[11:0]
V0656[0:7]
DVO_DE
+3.3VD
+1.8VD

Large size SCH diagram



HD Decoder and Grap

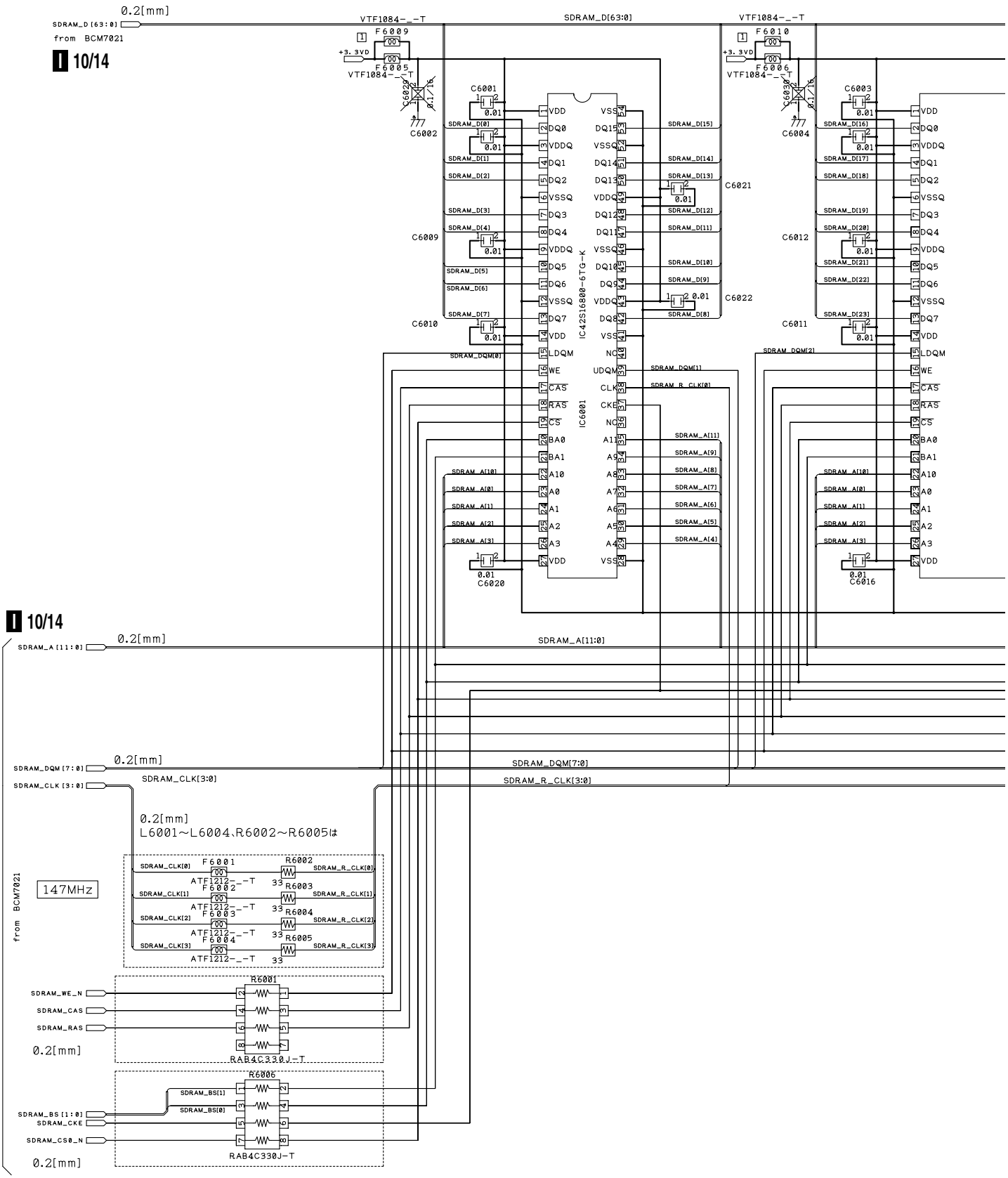
9/14
7/14
12/14
5/14
12/14
7/14
9/14
12/14
10/14

IC5501
BCM7021RKPB1G-D0-
1.27mm P
12/14
7/14
9/14
1/14
14/14
10/14
27MHz

3.36 TUNER BOARD ASSY (11/14)

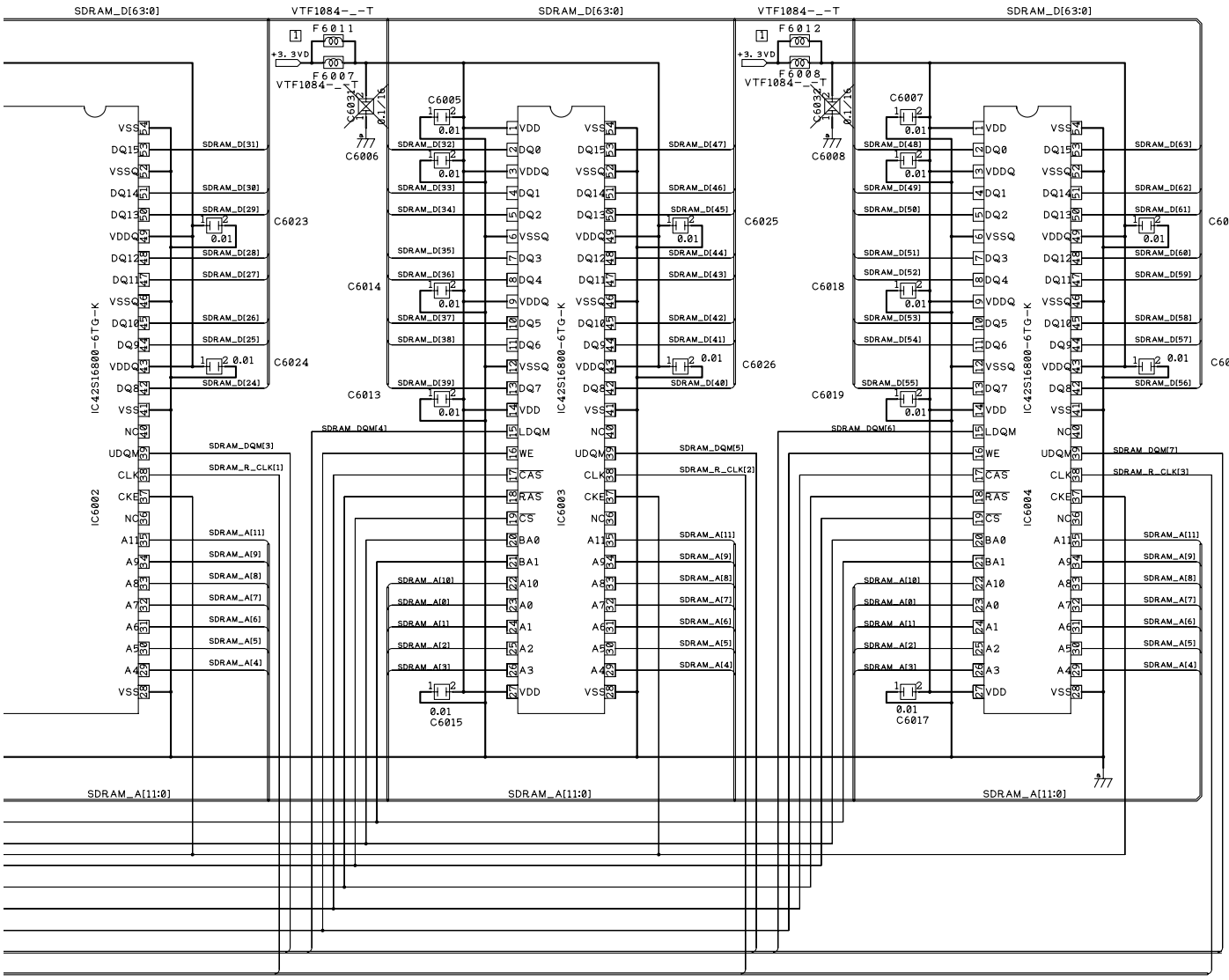
11/14 DTV TUNER BOARD ASSY (AWE1300)

SDRAM(x4)=880[mA]@AutoRefresh



11/14

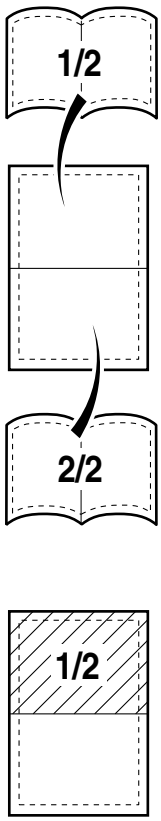
SDRAM on BCM7021
128Mbit x 4pcs

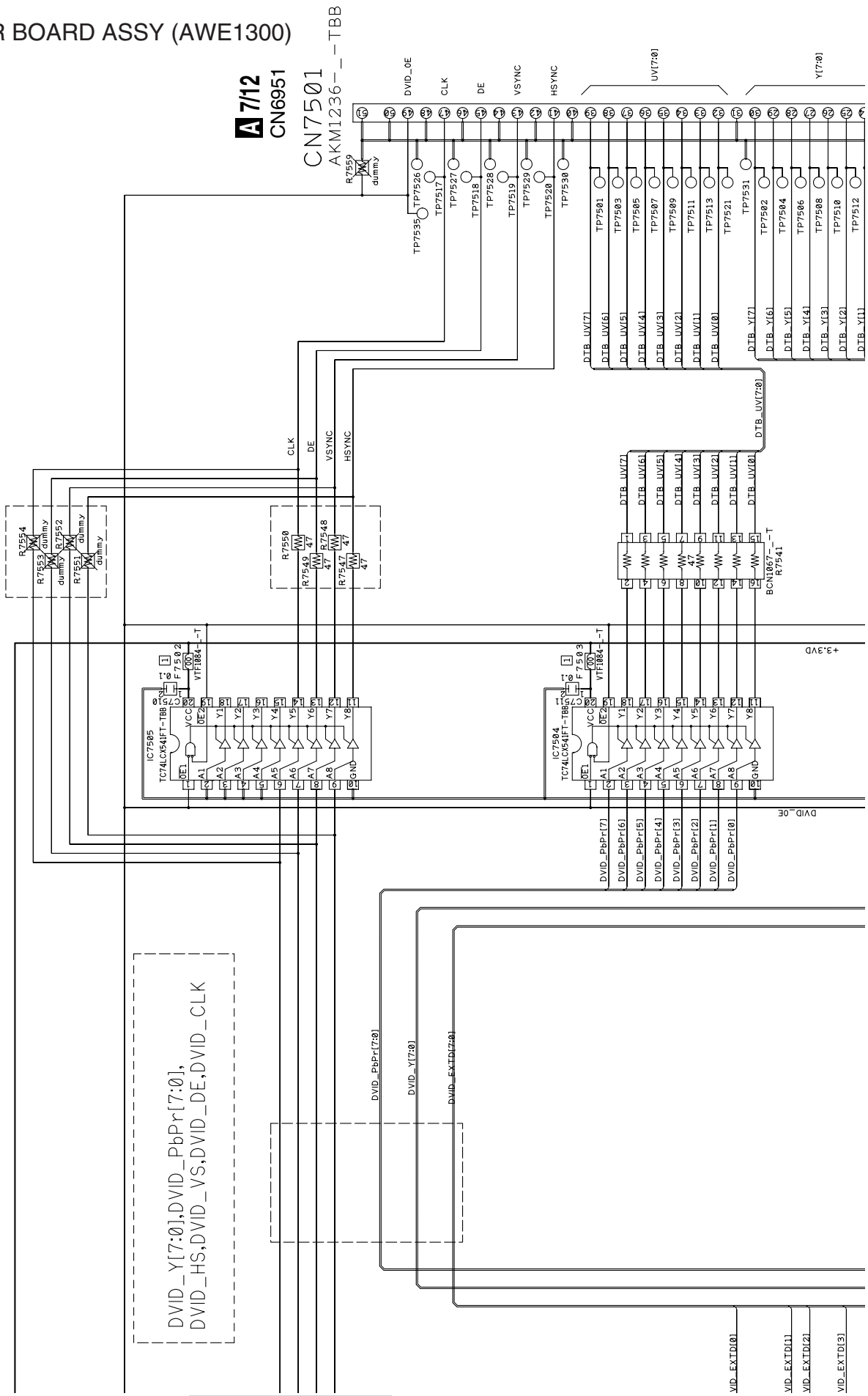


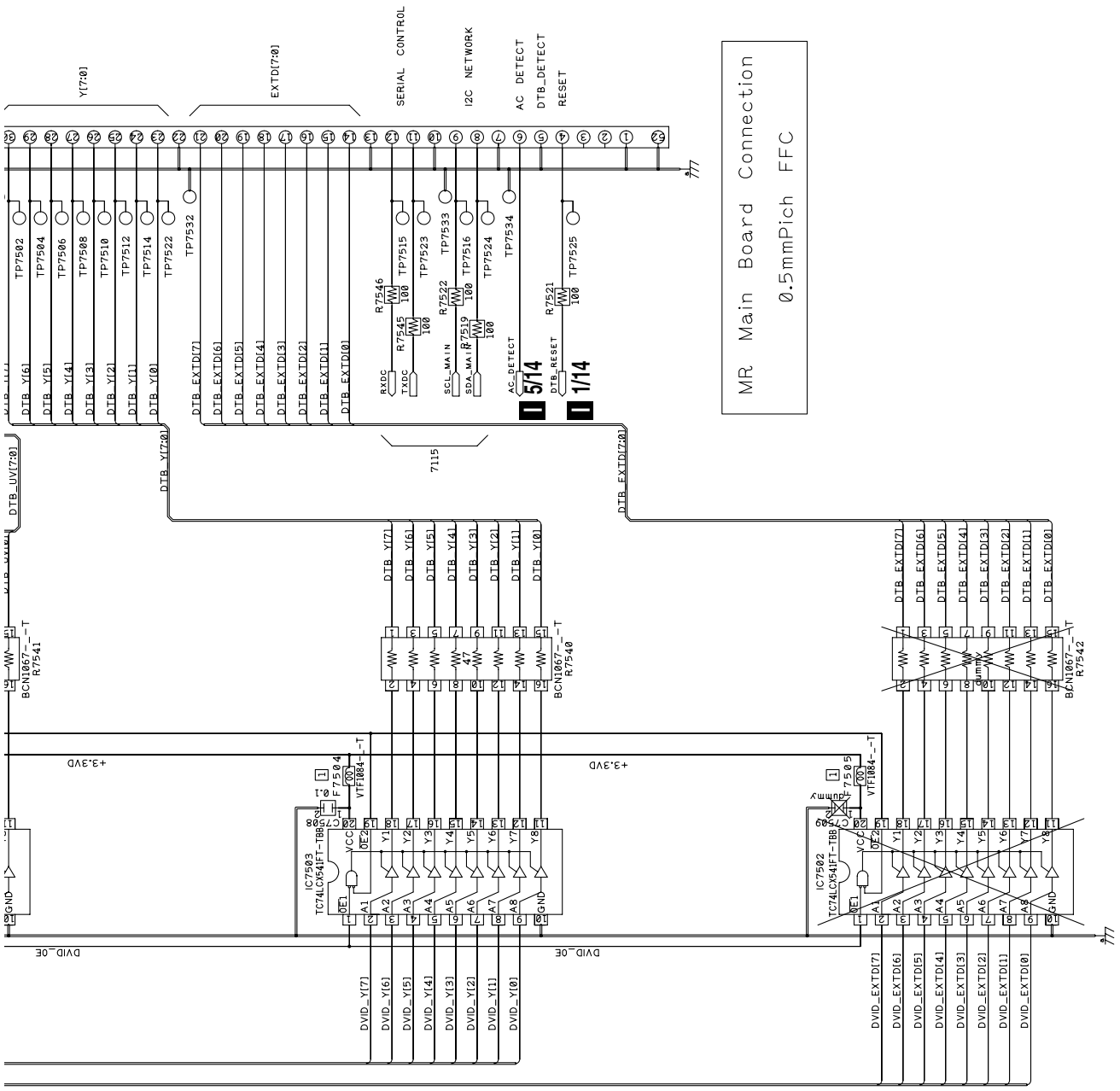
3.37 TUNER BOARD ASSY (12/14)

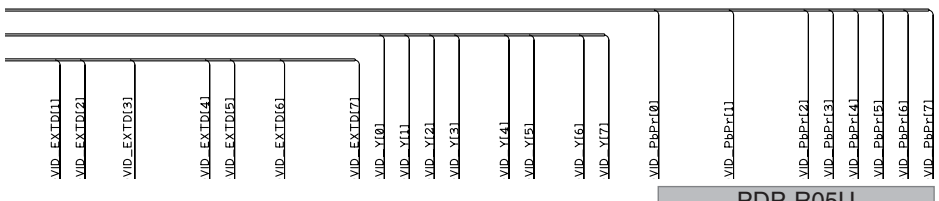
12/14 TUNER BOARD ASSY (AWE1300)

Large size SCH diagram






MR Main Board Connection
0.5mmPich FFC
Y[7:0]
EXTD[7:0]
SERIAL CONTROL
I2C NETWORK
AC DETECT
DTB_DETECT
RESET
DTB_UV[7:0]
DTB_Y[7:0]
DTB_EXTD[7:0]
+3.3VD
DVID_OE
DVID_Y[7:0]
DVID_EXTD[7:0]
IC7503
IC7502
TC74LCX541FT-TBS
VTF1084--T
BCN1067--T


VID_EXTD[1]
VID_EXTD[2]
VID_EXTD[3]
VID_EXTD[4]
VID_EXTD[5]
VID_EXTD[6]
VID_EXTD[7]
VID_Y[0]
VID_Y[1]
VID_Y[2]
VID_Y[3]
VID_Y[4]
VID_Y[5]
VID_Y[6]
VID_Y[7]
VID_PbPr[0]
VID_PbPr[1]
VID_PbPr[2]
VID_PbPr[3]
VID_PbPr[4]
VID_PbPr[5]
VID_PbPr[6]
VID_PbPr[7]

A

B

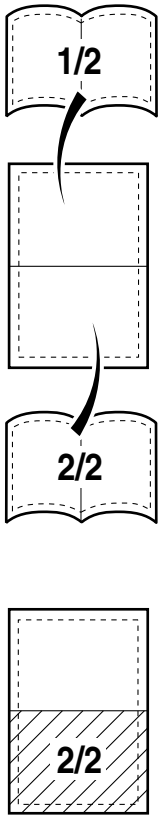
C

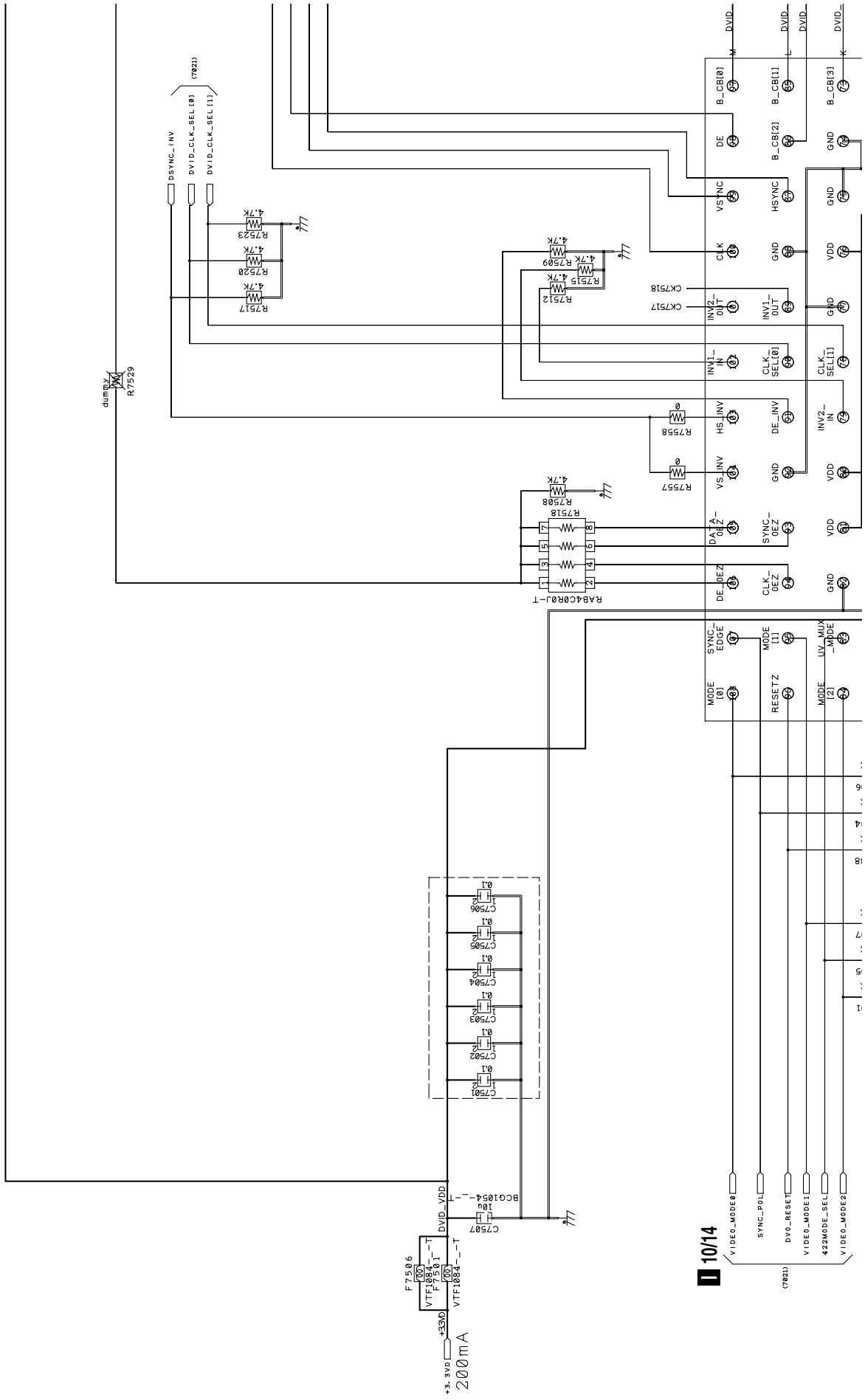
D

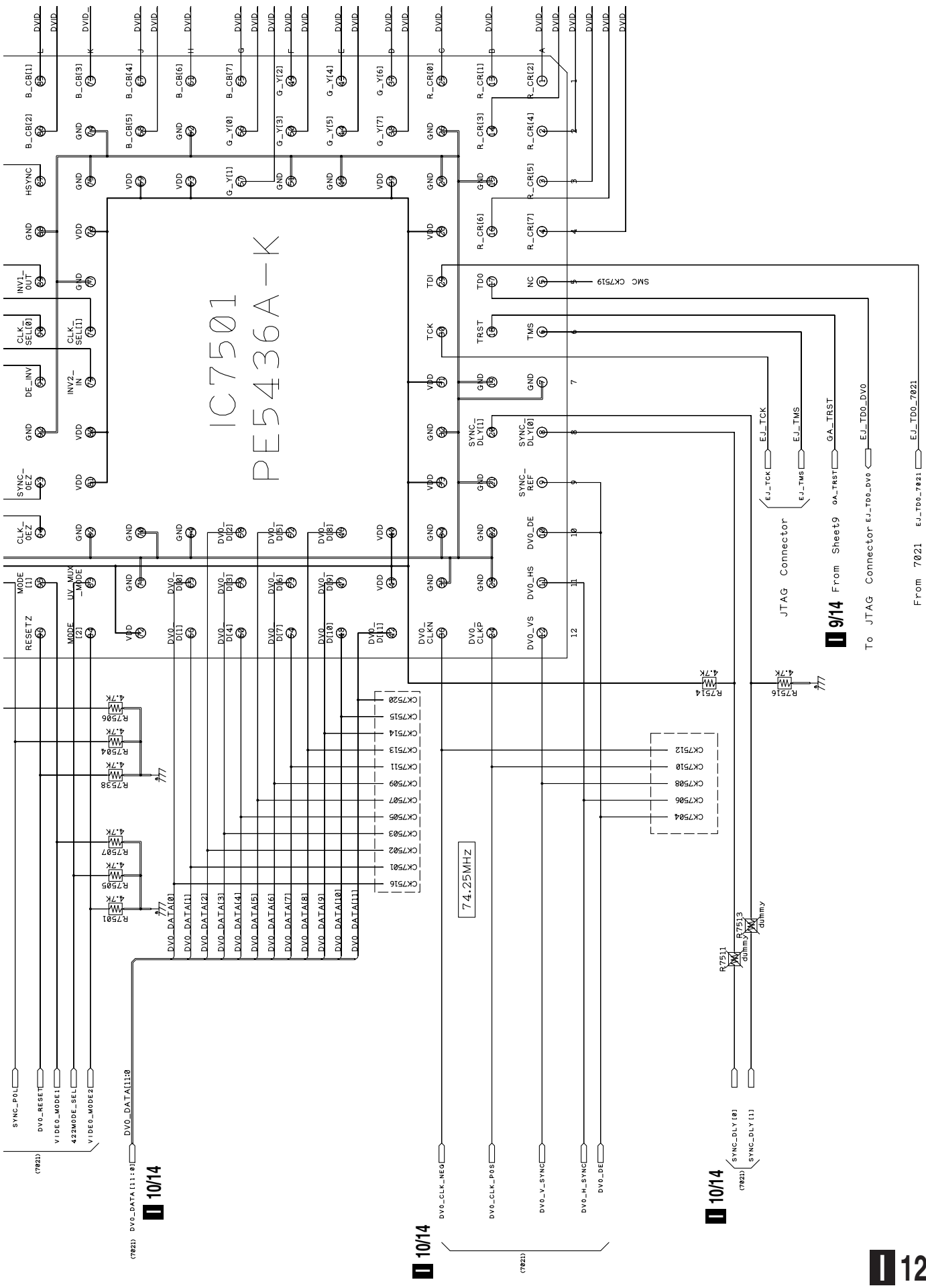
E

F

Large size SCH diagram

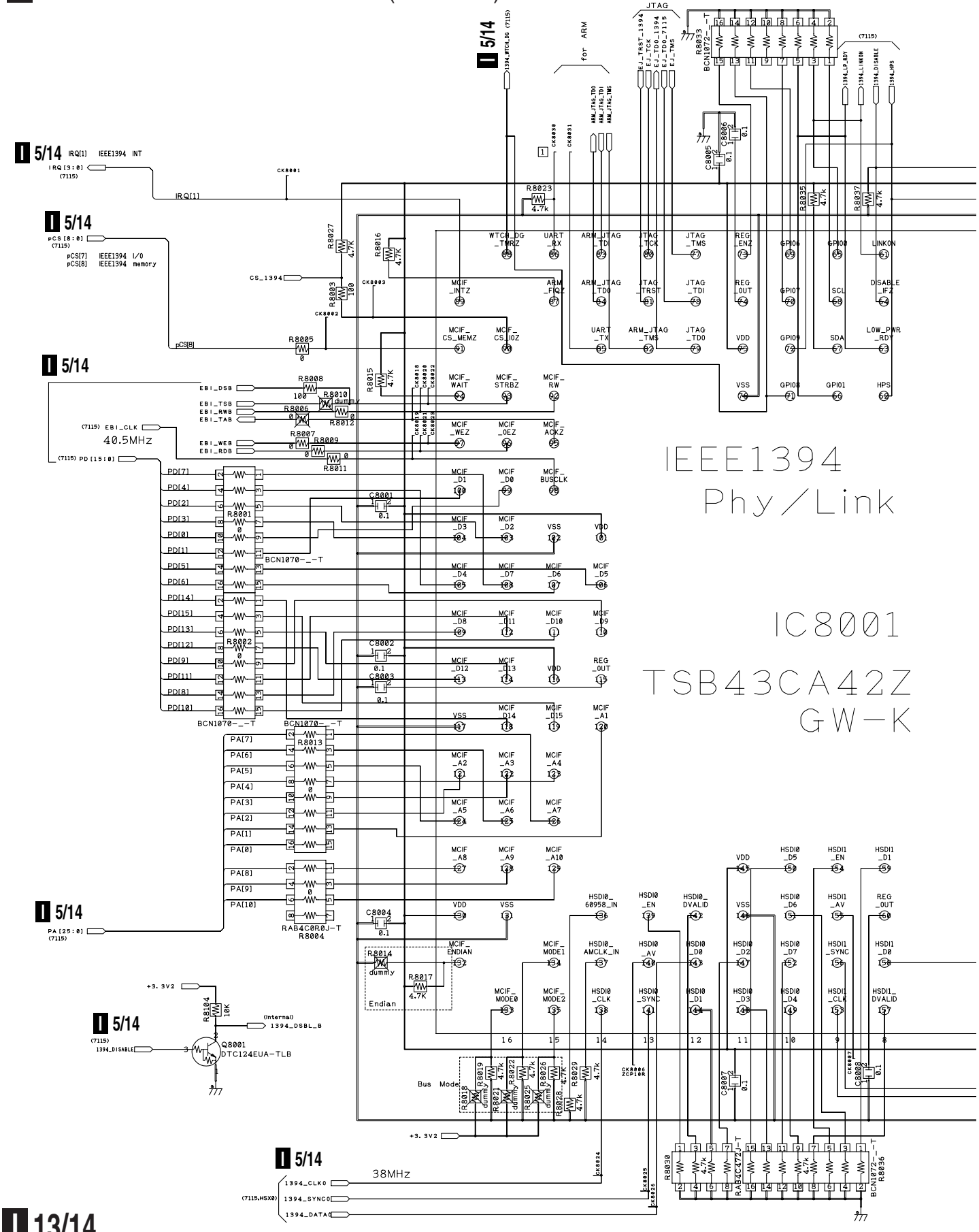




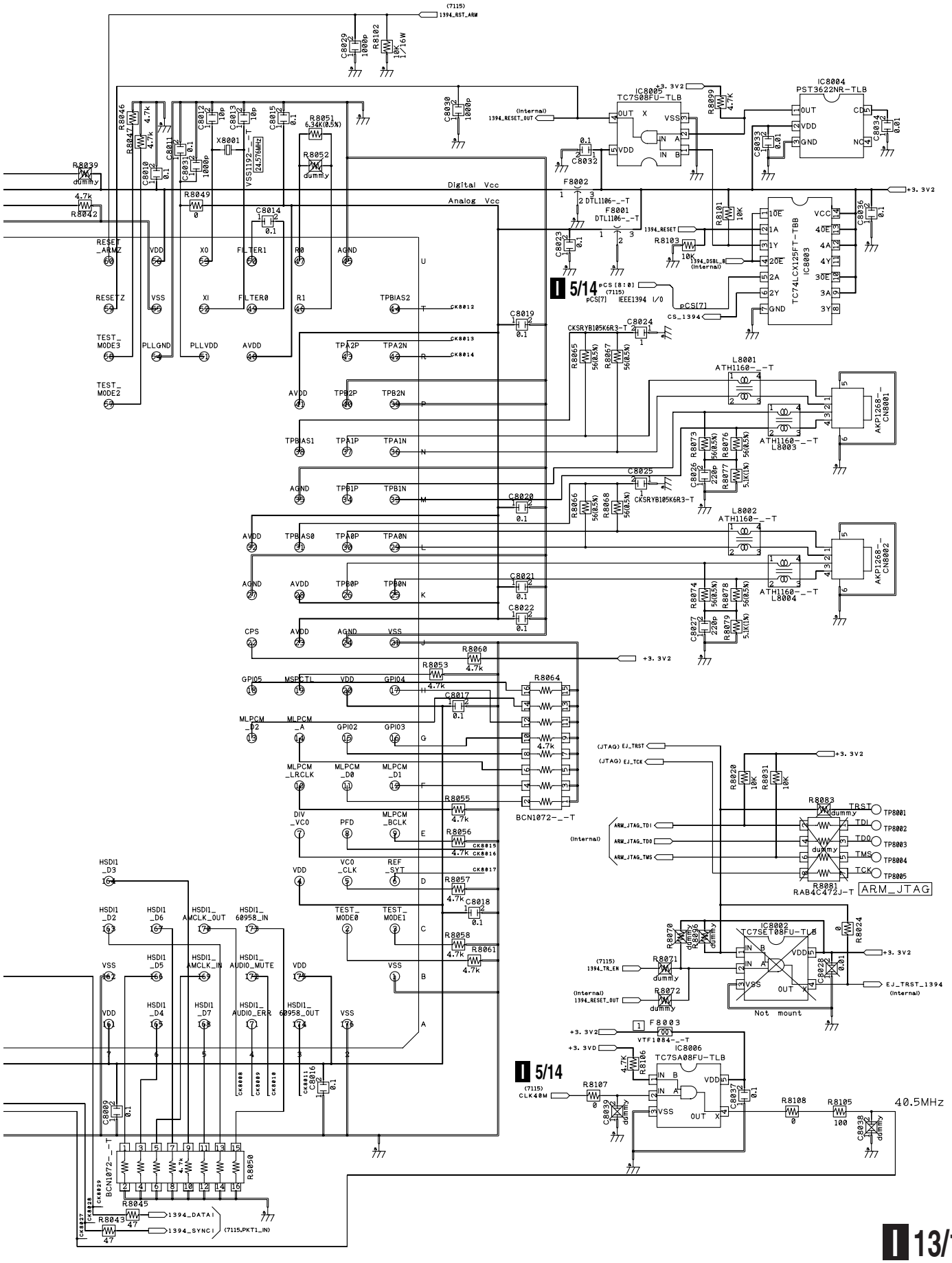

IC7501
PE5436A-K
JTAG Connector
From Sheet9
To JTAG Connector
From 7021
74.25MHz
9/14
10/14
10/14
10/14
12/14

3.38 TUNER BOARD ASSY (13/14)

13/14 DTV TUNER BOARD ASSY (AWE1300)

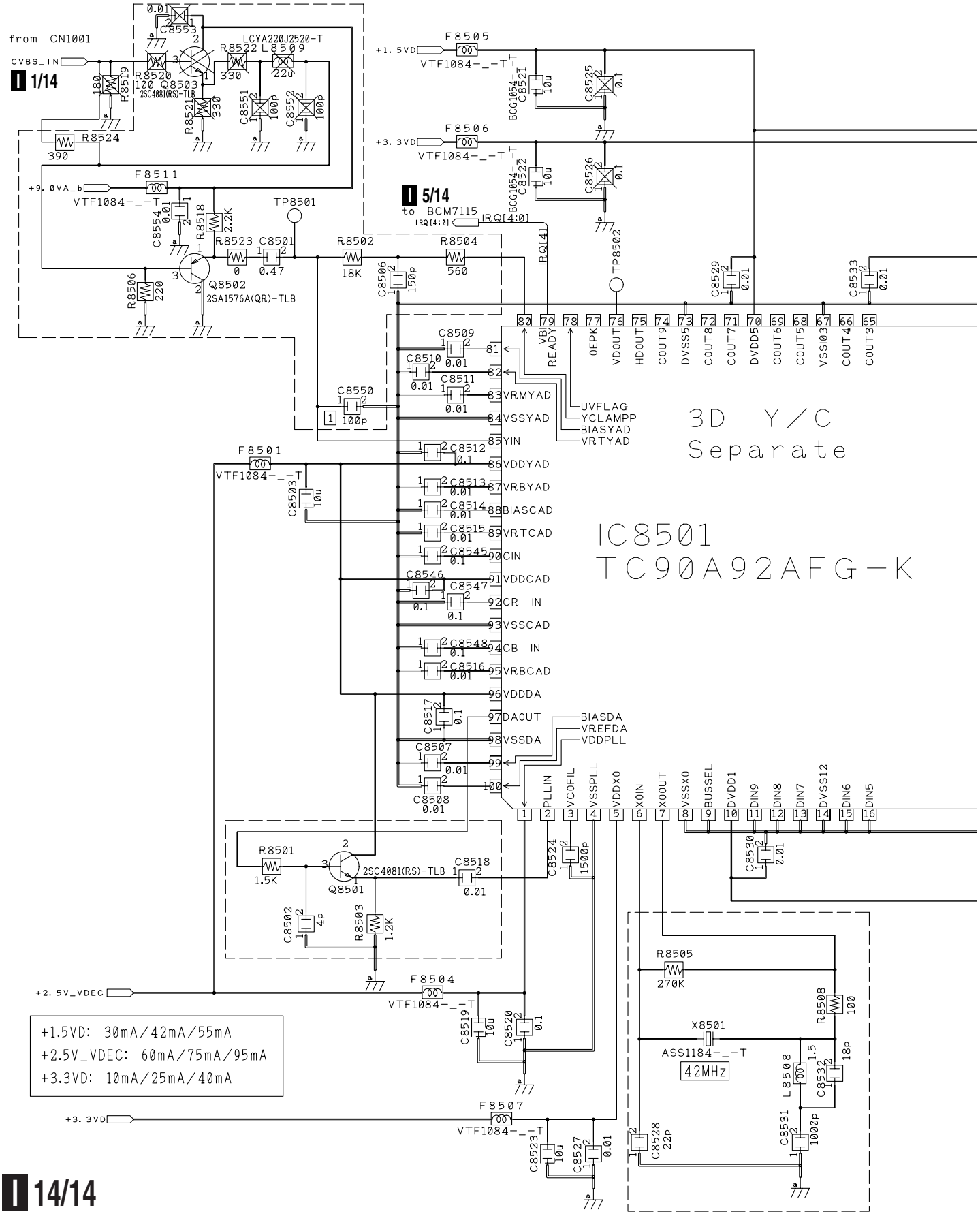


13/14

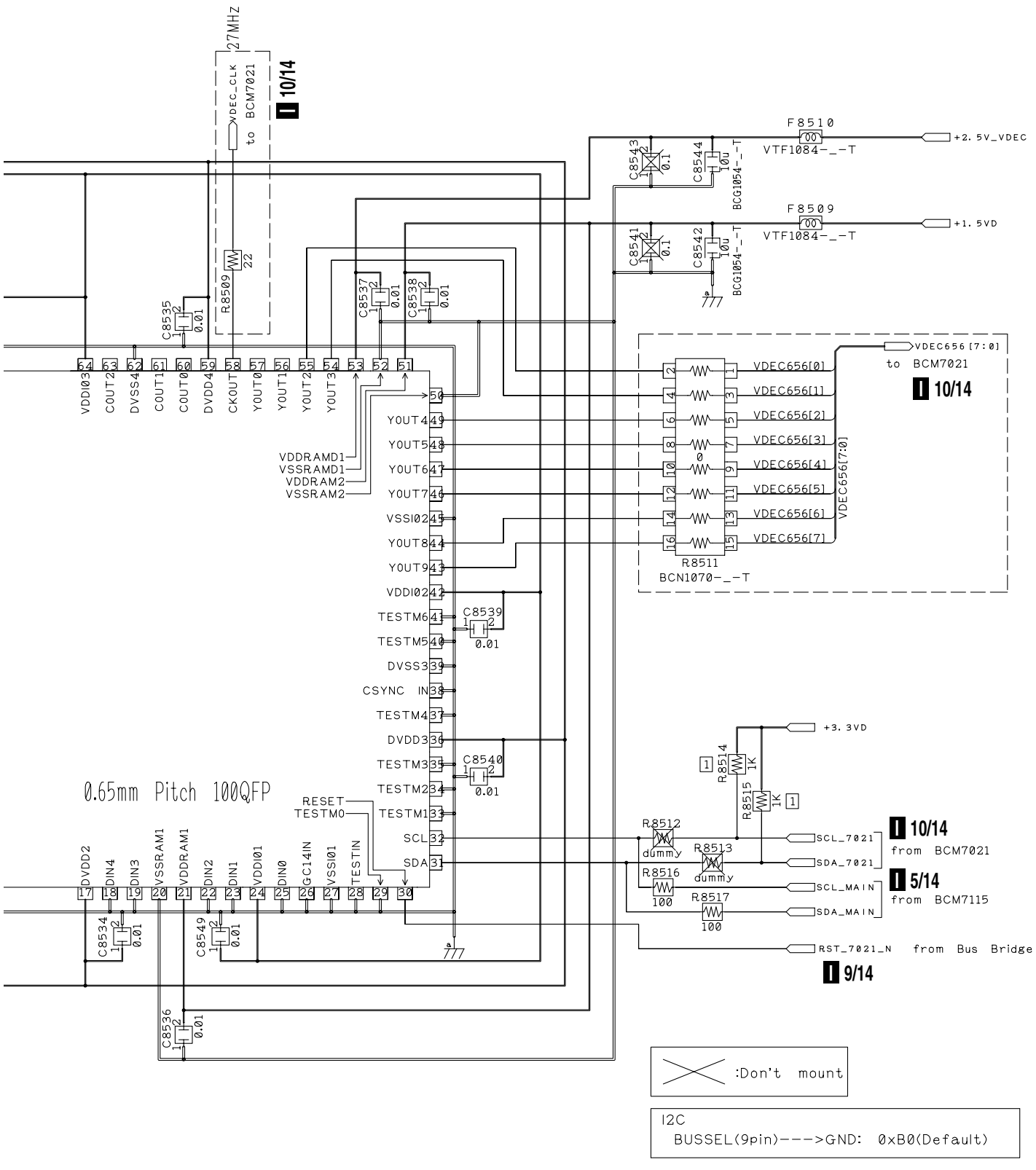

Digital Vcc
Analog Vcc
+3.3V2
1394_RST_ARM
1394_RESET_OUT
1394_RESET
1394_TR_EN
1394_DATA1
1394_SYNC1
(7115.PKT1_IN)
CS_1394
EJ_TRST_1394
ARM_JTAG
Not mount
40.5MHz
5/14
13/14
IC8005 TC7S08FU-TLB
IC8004 PST3622NR-TLB
IC8003 TC74LCX125FT-TBB
IC8002 TC7SET08FU-TLB
IC8006 TC7SA08FU-TLB
L8001 ATH1160-__-T
L8002 ATH1160-__-T
L8003 ATH1160-__-T
L8004 ATH1160-__-T
BCN1072-__-T
F8001 DTL1106-__-T
F8002 DTL1106-__-T
F8003 VTF1084-__-T
X8001 VSS1192-__-T 24.576MHz

3.39 TUNER BOARD ASSY (14/14)

14/14 DTV TUNER BOARD ASSY (AWE1300)

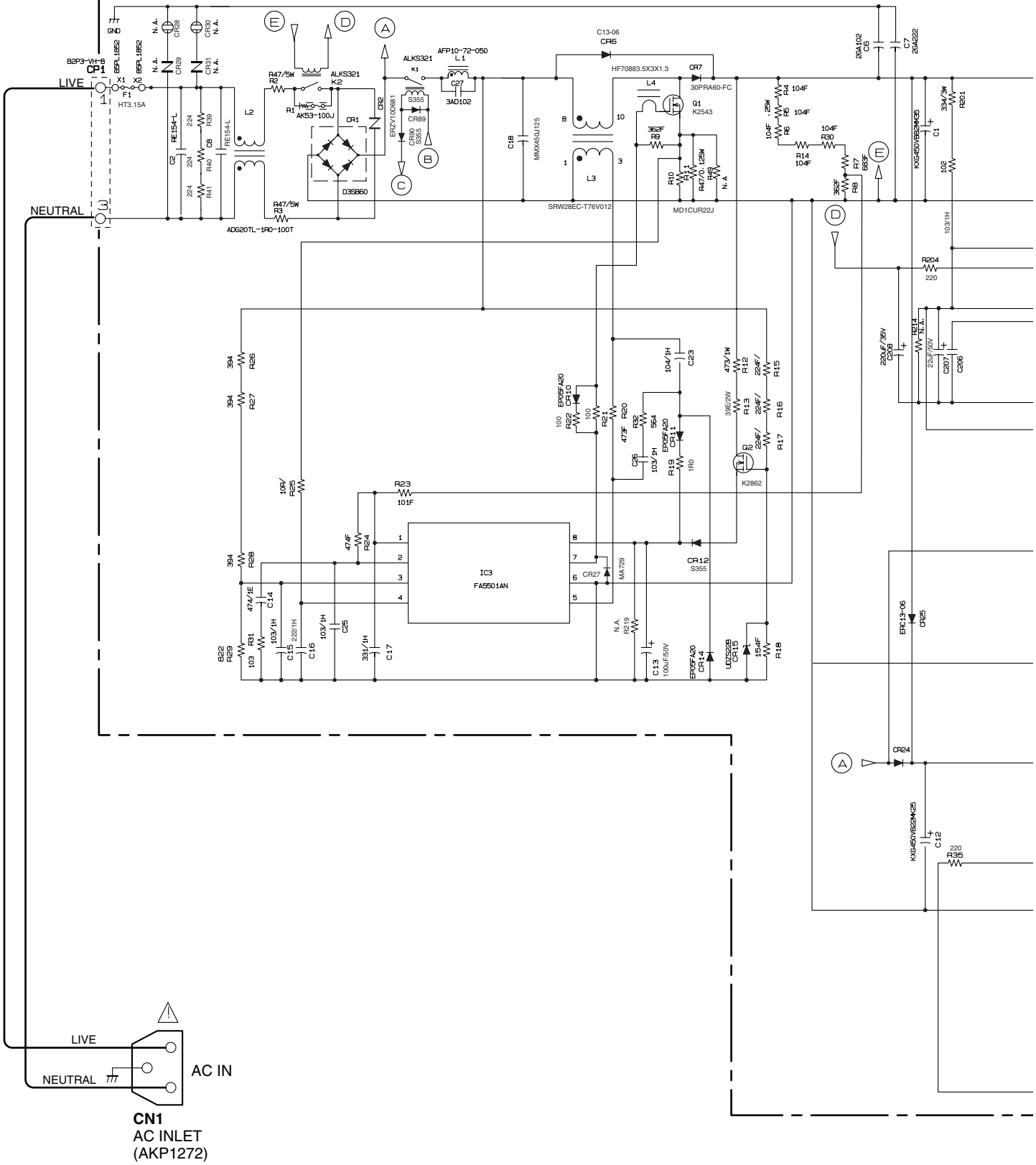


14/14


27MHZ
VDEC_CLK
to BCM7021
10/14
R8509
22
C8535
0.01
C8537
0.01
C8538
0.01
F8510
VTF1084-_-T
+2.5V_VDEC
C8543
0.1
C8544
10u
BCG1054-_T
F8509
VTF1084-_-T
+1.5VD
C8541
0.1
C8542
10u
BCG1054-_T
VDEC656[7:0]
to BCM7021
10/14
VDEC656[0]
VDEC656[1]
VDEC656[2]
VDEC656[3]
VDEC656[4]
VDEC656[5]
VDEC656[6]
VDEC656[7]
R8511
BCN1070-_-T
VDDI03
COUT2
DVSS4
COUT1
COUT0
DVDD4
CKOUT
YOUT0
YOUT1
YOUT2
YOUT3
YOUT4
YOUT5
YOUT6
YOUT7
VSSI02
YOUT8
YOUT9
VDDI02
TESTM6
TESTM5
DVSS3
CSYNC IN
TESTM4
DVDD3
TESTM3
TESTM2
TESTM1
SCL
SDA
VDDRAMD1
VSSRAMD1
VDDRAM2
VSSRAM2
C8539
0.01
C8540
0.01
0.65mm Pitch 100QFP
RESET
TESTM0
DVDD2
DIN4
DIN3
VSSRAM1
VDDRAM1
DIN2
DIN1
VDDI01
DIN0
GC14IN
VSSI01
TESTIN
C8534
0.01
C8549
0.01
C8536
0.01
+3.3VD
R8514
1K
R8515
1K
R8512
dummy
R8513
dummy
R8516
100
R8517
100
SCL_7021
SDA_7021
10/14
from BCM7021
SCL_MAIN
SDA_MAIN
5/14
from BCM7115
RST_7021_N
from Bus Bridge
9/14
:Don't mount
I2C
BUSSEL(9pin)--->GND: 0xB0(Default)

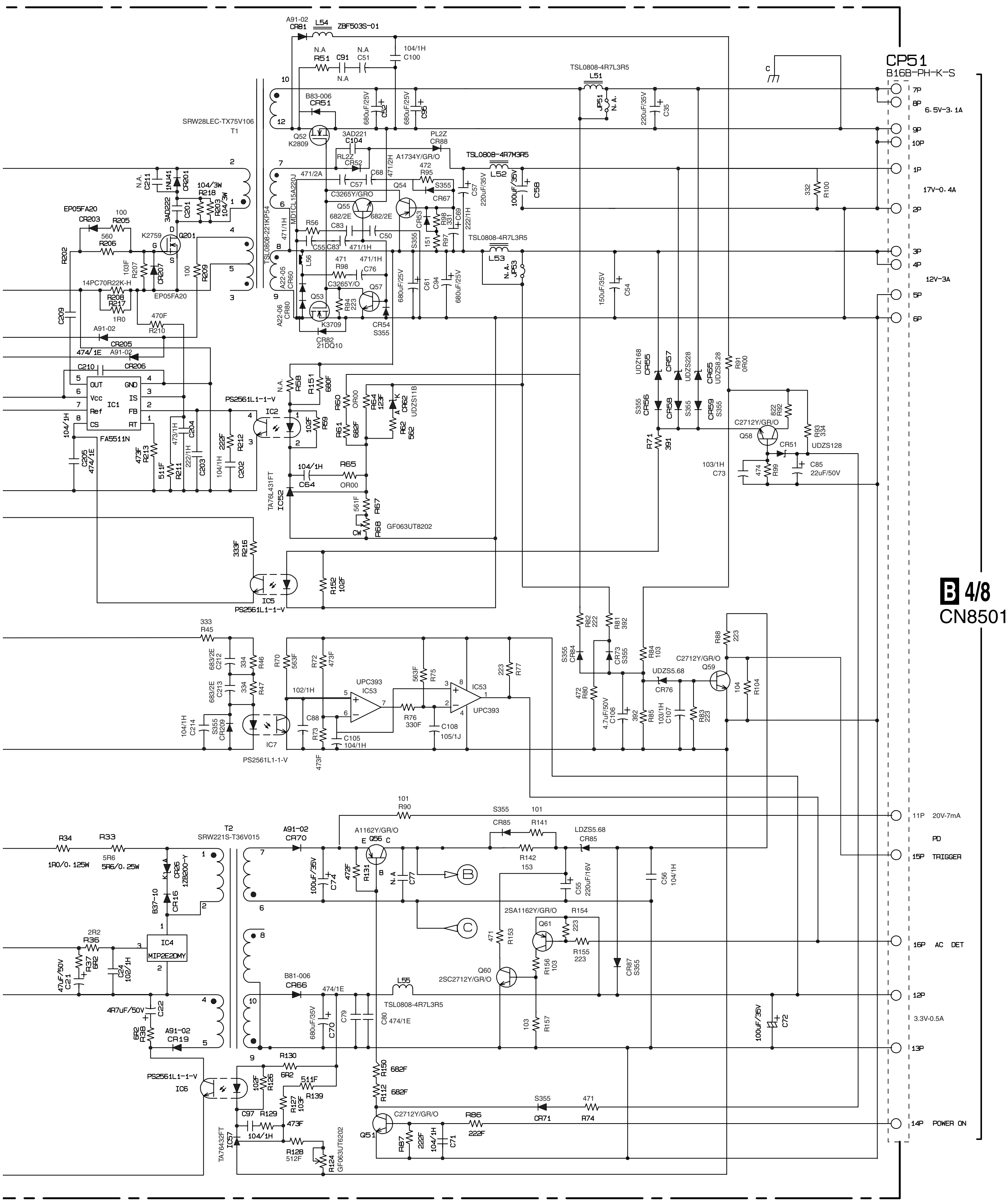
3.40 POWER SUPPLY UNIT

K POWER SUPPLY UNIT (AXY1091)



5 6 7 8

A


CP51
B16B-PH-K-S
B 4/8
CN8501
7P
8P 6.5V-3.1A
9P
10P
1P
17V-0.4A
2P
3P
4P
12V-3A
5P
6P
11P 20V-7mA
PD
15P TRIGGER
16P AC DET
12P
3.3V-0.5A
13P
14P POWER ON
SRW28LEC-TX75V106
T1
T2
SRW221S-T36V015
IC1
FA5511N
IC2
PS2561L1-1-V
IC5
PS2561L1-1-V
IC7
PS2561L1-1-V
IC6
PS2561L1-1-V
IC4
MIP2E2DMY
IC52
TA76L431FT
IC53
UPC393
IC57
TA76432FT
Q201
K2759
Q52
K2809
Q53
K3709
Q58
C2712Y/GR/O
Q59
C2712Y/GR/O
Q60
2SC2712Y/GR/O
Q61
2SA1162Y/GR/O
Q51
C2712Y/GR/O
Q56
A1162Y/GR/O
L51
TSL0808-4R7L3R5
L52
TSL0808-4R7M3R5
L53
TSL0808-4R7L3R5
L54
ZBF503S-01
L55
TSL0808-4R7L3R5
GF063UT8202
GF063UT6202

B

C

D

E

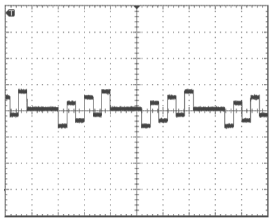
F

3.41 WAVEFORMS

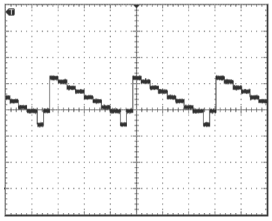
Note : The encircled numbers denote measuring point in the schematic diagram.

A MR MAIN BOARDASSY

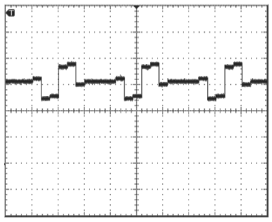
1 TP6402 (Component B)
V: 500mV/div. H: 20µsec/div.



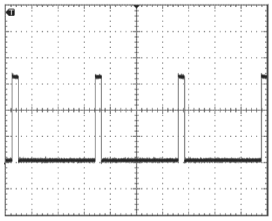
2 TP6403 (Component G)
V: 500mV/div. H: 20µsec/div.



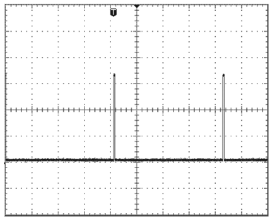
3 TP6404 (Component R)
V: 500mV/div. H: 20µsec/div.



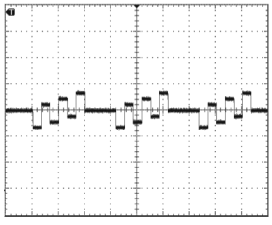
4 TP6405 (HD2_MAIN)
V: 1V/div. H: 20µsec/div.



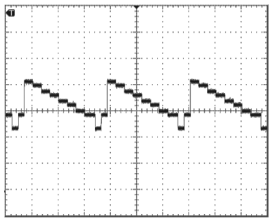
5 TP6406 (VD2_MAIN)
V: 1V/div. H: 400msec/div.



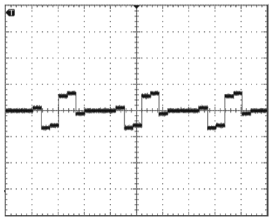
6 TP6604 (Component B)
V: 500mV/div. H: 20µsec/div.



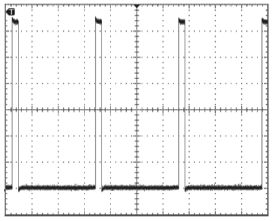
7 TP6605 (Component G)
V: 500mV/div. H: 20µsec/div.



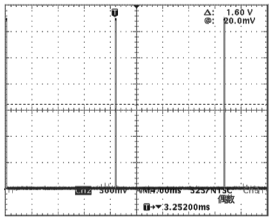
8 TP6606 (Component R)
V: 500mV/div. H: 20µsec/div.



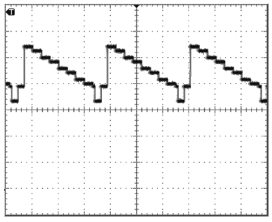
9 TP6607 (HD2_SUB)
V: 500mV/div. H: 20µsec/div.



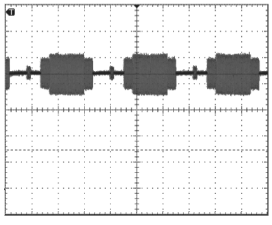
10 TP6608 (VD2_SUB)
V: 500mV/div. H: 4msec/div.



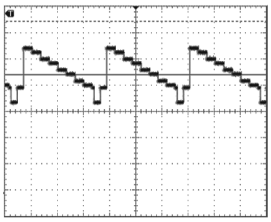
11 TP7451 (MAIN_Y)
V: 1V/div. H: 20µsec/div.



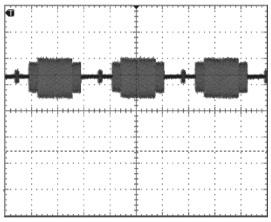
12 TP7452 (MAIN_C)
V: 1V/div. H: 20µsec/div.



13 TP7456 (SUB_Y)
V: 1V/div. H: 20µsec/div.

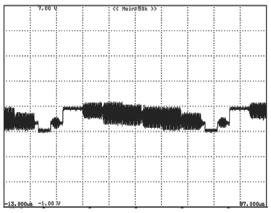


14 TP7457 (SUB_C)
V: 1V/div. H: 20µsec/div.

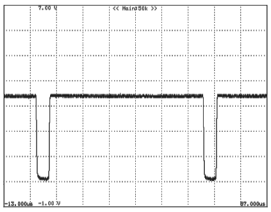


B AV BOARD ASSY

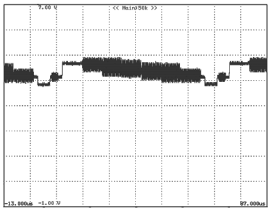
1 TP7514 (AIR_V)
V: 1V/div. H: 10µsec/div.



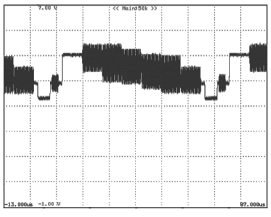
2 R7541 - R7542 (AIR_HS)
V: 1V/div. H: 10µsec/div.



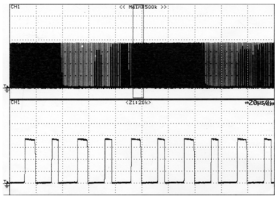
3 IC8002-pin 63 (AIR_V)
V: 1V/div. H: 10µsec/div.



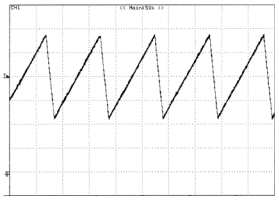
4 IC8002-pin 44 (MAIN_Y)
V: 1V/div. H: 10µsec/div.



5 IC8503-pin 1 (SW COLLECTOR) (36V VDD) V: 10V/div.
H: 500µsec/div.(1ch), 20µsec/div.(2ch)



6 IC8503-pin 3 (TIMING CAPACITOR) (36V VDD Oscillation)
V: 0.2V/div. H: 10µsec/div.



3.42 VOLTAGES

B AV BOARD ASSY **A** MR MAIN BOARD ASSY

CN8652 (AKM1201)		Voltage (V)	CN7455 (AKM1201)	
No.	Name		Name	No.
1	GND	0	GND	50
2	GND	0	GND	49
3	AUDIO_R	0	AUDIO_R	48
4	GND	0	GND	47
5	AUDIO_L	0	AUDIO_L	46
6	GND	0	GND	45
7	HDMI_RCH	0	HDMI_RCH	44
8	GND	0	GND	43
9	HDMI_LCH	0	HDMI_LCH	42
10	GND	0	GND	41
11	GND	0	GND	40
12	GND	0	GND	39
13	GND	0	GND	38
14	GND	0	GND	37
15	GND	0	GND	36
16	GND	0	GND	35
17	GND	0	GND	34
18	GND	0	GND	33
19	GND	0	GND	32
20	GND	0	GND	31
21	GND	0	GND	30
22	GND	0	GND	29
23	GND	0	GND	28
24	GND	0	GND	27
25	GND	0	GND	26
26	AIR_AFT2	1.7	AIR_AFT2	25
27	AIR_HS2	0	AIR_HS2	24
28	AIR_AFT	1.8	AIR_AFT	23
29	AIR_HS	0.5	AIR_HS	22
30	RST_IF	3.3	RST_IF	21
31	TXD_WR	3.3	TXD_WR	20
32	RXD_WR	3.3	RXD_WR	19
33	SDA_AV	5	SDA_AV	18
34	SCL_AV	5	SCL_AV	17
35	RXD_IF	3.3	RXD_IF	16
36	TXD_IF	3.3	TXD_IF	15
37	CLK_IF	3.3	CLK_IF	14
38	REQ_IF	0	REQ_IF	13
39	BUSY_IF	0	BUSY_IF	12
40	CE_IF	3.3	CE_IF	11
41	RESET_TXT	3.3	RESET_TXT	10
42	RELAY	2.4	RELAY	9
43	REM_B	3.3	REM_B	8
44	PSW1	0	PSW1	7
45	PD_MAIN	0	PD_MAIN	6
46	WE_ROM	0	WE_ROM	5
47	AM_MUTE	0	AM_MUTE	4
48	N.C.	–	N.C.	3
49	N.C.	–	N.C.	2
50	ELITE_DET	AWZ6978 0V AWZ6979 3.3V	ELITE_DET	1

B AV BOARD ASSY **A** MR MAIN BOARD ASSY

CN8504 (KM200NA15)		Voltage (V)	CN7451 (AKM1301)	
No.	Name		Name	No.
15	GND	0.0	GND	1
14	V+3V_STB	3.3	V+3V_STB	2
13	GND	0.0	GND	3
12	V+3V_UCOM	3.3	V+3V_UCOM	4
11	GND	0.0	GND	5
10	V+12V_16V	16.9	V+12V_16V	6
9	GND	0.0	GND	7
8	V+6V	6.7	V+6V	8
7	GND_D	0.0	GND_D	9
6	V+1V_DD	1.5	V+1V_DD	10
5	V+1V_DD	1.5	V+1V_DD	11
4	GND_D	0.0	GND_D	12
3	V+3V_DD	3.3	V+3V_DD	13
2	V+3V_DD	3.3	V+3V_DD	14
1	GND_D	0.0	GND_D	15

B AV BOARD ASSY — **A** MR MAIN BOARD ASSY

CN8651 (AKM1201)		Voltage (V)	CN7454 (AKM1201)	
No.	Name		Name	No.
1	AC_DET	2.7	AC_DET	50
2	KEY_B	3.3	KEY_B	49
3	STB_MT	0	STB_MT	48
4	AC_OFF	0	AC_OFF	47
5	SDA_EP2	3.3	SDA_EP2	46
6	SCL_EP2	3.3	SCL_EP2	45
7	VCC_EP	3.3	VCC_EP	44
8	N.C.	–	N.C.	43
9	N.C.	–	N.C.	42
10	WE_TXT	0	WE_TXT	41
11	N.C.	–	N.C.	40
12	MON_MUTE	0	MON_MUTE	39
13	DSUB_DET	0	DSUB_DET	38
14	PN2	0	PN2	37
15	VD_TXT	0	VD_TXT	36
16	HD_TXT	0	HD_TXT	35
17	PCA_V_SUB	0	PCA_V_SUB	34
18	PCA_H_SUB	0	PCA_H_SUB	33
19	PCA_V	0	PCA_V	32
20	PCA_H	0	PCA_H	31
21	BLK	0	BLK	30
22	GND	0	GND	29
23	GND	0	GND	28
24	GND	0	GND	27
25	SUBC_Y	4.5	SUBC_Y	26
26	GND	0	GND	25
27	SUBC_PR	4.5	SUBC_PR	24
28	GND	0	GND	23
29	SUBC_PB	4.5	SUBC_PB	22
30	GND	0	GND	21
31	SUB_C	4.3	SUB_C	20
32	GND	0	GND	19
33	SUB_Y	3.7	SUB_Y	18
34	GND	0	GND	17
35	G_CCTXT	1.3	G_CCTXT	16
36	GND	0	GND	15
37	R_CCTXT	1.3	R_CCTXT	14
38	GND	0	GND	13
39	B_CCTXT	1.3	B_CCTXT	12
40	GND	0	GND	11
41	MAINC_Y	4.5	MAINC_Y	10
42	GND	0	GND	9
43	MAINC_PR	4.5	MAINC_PR	8
44	GND	0	GND	7
45	MAINC_PB	4.5	MAINC_PB	6
46	GND	0	GND	5
47	MAIN_C	4.4	MAIN_C	4
48	GND	0	GND	3
49	MAIN_Y	4.4	MAIN_Y	2
50	GND	0	GND	1

I TUNER BOARD ASSY — **A** MR MAIN BOARD ASSY

CN7501 (AKM1236)		Voltage (V)	CN6951 (AKM1201)	
No.	Name		Name	No.
1	GND	0	GND_D	50
2	N.C.	–	N.C.	49
3	Not used		Not used	48
4	RESET	3.37	RST_DT	47
5	DTB_DET	0	DT_DET	46
6	N.C.	–	N.C.	45
7	GND	0	GND_D	44
8	N.C.	–	N.C.	43
9	N.C.	–	N.C.	42
10	GND	0	GND_D	41
11	TXDC	3.3	RXD_DT	40
12	RXDC	3.3	TXD_DT	39
13	GND	0	GND_D	38
14	–	–	–	37
15	GND	0	GND_D	36
16	GND	0	GND_D	35
17	GND	0	GND_D	34
18	GND	0	GND_D	33
19	GND	0	GND_D	32
20	GND	0	GND_D	31
21	GND	0	GND_D	30
22	GND	0	GND_D	29
23	Y0	0/3.3	Y0	28
24	Y1	0/3.3	Y1	27
25	Y2	0/3.3	Y2	26
26	Y3	0/3.3	Y3	25
27	Y4	0/3.3	Y4	24
28	Y5	0/3.3	Y5	23
29	Y6	0/3.3	Y6	22
30	Y7	0/3.3	Y7	21
31	GND	0	GND_D	20
32	UV0	0/3.3	UV0	19
33	UV1	0/3.3	UV1	18
34	UV2	0/3.3	UV2	17
35	UV3	0/3.3	UV3	16
36	UV4	0/3.3	UV4	15
37	UV5	0/3.3	UV5	14
38	UV6	0/3.3	UV6	13
39	UV7	0/3.3	UV7	12
40	GND	0	GND_D	11
41	HS	3.1	HS	10
42	GND	0	GND_D	9
43	VS	3.2	VS	8
44	GND	0	GND_D	7
45	DE	2.6	DE	6
46	GND	0	GND_D	5
47	CLK	1.6	CLK	4
48	GND	0	GND_D	3
49	OE_B	0	OE_B	2
50	GND	0	GND_D	1

A MR MAIN BOARD ASSY — FAN MOTOR

CN7202 , CN7204 (AKM1274)		Voltage (V)	CN6951 (AKM1201)	
No.	Name		Name	No.
1	FAN_12V	6.9		
2	FAN_NG	0		
3	GND	0		

B AV BOARD ASSY — **H** LED ASSY

CN8656 (KM200NA7)		Voltage (V)	CN7651 (AKM1293-A-TBB)	
No.	Name		Name	No.
1	V+3V_STB	3.3	V+3V_STB	1
2	LED_G	0	LED_G	2
3	LED_R	3.3	LED_R	3
4	GND	0	GND	4
5	LED_MDM	0	LED_MDM	5
6	LED_FCT	3.3	LED_FCT	6
7	GND	0.0	GND	7

B AV BOARD ASSY — **K** POWER SUPPLY UNIT

CN8501 (KM200NA16)		Voltage (V)	CP51 (KM200NA16)	
No.	Name		Name	No.
1	V+16.5V	17.6	V+16.5V	1
2	GND	0	GND	2
3	V+12V	12	V+12V	3
4	V+12V	12	V+12V	4
5	GND	0	GND	5
6	GND	0	GND	6
7	V+6.5V	6.8	V+6.5V	7
8	V+6.5V	6.8	V+6.5V	8
9	GND	0	GND	9
10	GND	0	GND	10
11	V+12V_STB	14.9	V+12V_STB	11
12	V+3V_STB	3.3	V+3V_STB	12
13	GND	0	GND	13
14	RELAY	2.4	RELAY	14
15	PD_TRIGGER	0	PD_TRIGGER	15
16	AC_DET	2.7	AC_DET	16

B AV BOARD ASSY — **F** SR ASSY

CN7801 (AKM1233)		Voltage (V)	CN9452 (CKS3826)	
No.	Name		Name	No.
1	NC	–	NC	12
2	NC	–	NC	11
3	TXD_SR4	0	TXD_SR4	10
4	RXD_SR4	5	RXD_SR4	9
5	5V_STD	5	5V_STD	8
6	NC	–	NC	7
7	GND	0.0	GND	6
8	REM_B	5	REM_B	5
9	SR_IN	3.3	SR_IN	4
10	GND	0.0	GND	3
11	IR	0.0	IR	2
12	GND	0.0	GND	1

A MR MAIN BOARD ASSY — TRAP SW

CN7203 (AKM1213)		Voltage (V)		
No.	Name		Name	No.
1	TRAP_SW	0.7		
2	NC			
3	V+3V_UCOM	3.3		

B AV BOARD ASSY — **I** TUNER BOARD ASSY

CN8502 (KM200NA12)		Voltage (V)	CN1002 (AKM1298-A-TBB)	
No.	Name		Name	No.
1	NC	–	NC	1
2	GHD_D	0	GHD_D	2
3	V+3.3VA	3.3	V+3.3VA	3
4	GND_D	0.0	GND_D	4
5	V+5VA	5	V+5VA	5
6	GND_D	0	GND_D	6
7	V+6.5VA	6.8	V+6.5VA	7
8	GND_D	0.0	GND_D	8
9	V+12V	12	V+12V	9
10	GND_D	0.0	GND_D	10
11	V+30V	31	V+30V	11
12	GND_D	0.0	GND_D	12

B AV BOARD ASSY — **I** TUNER BOARD ASSY

CN8503 (KM200NA14)		Voltage (V)	CN1003 (AKM1300-A-TBB)	
No.	Name		Name	No.
1	GND_D	0	GND_D	1
2	V+6.5VD	6.8	V+6.5VD	2
3	GND_D	0	GND_D	3
4	V+5VD	5	V+5VD	4
5	GND_D	0	GND_D	5
6	V+1.8VD	1.8	V+1.8VD	6
7	GND_D	0	GND_D	7
8	V+3.3V2	3.3	V+3.3V2	8
9	GND_D	0	GND_D	9
10	V+3.3VD	3.3	V+3.3VD	10
11	V+3.3VD	3.3	V+3.3VD	11
12	GND_D	0	GND_D	12
13	V+2.5VD	2.5	V+2.5VD	13
14	GND_D	0	GND_D	14

A MR MAIN BOARD ASSY — **E** MDR ASSY

CN7402 (AKM1234)		Voltage (V)	CN9302 (CKS3830)	
No.	Name		Name	No.
16	GND_D	0	GND_D	1
15	AUDIO_L	0	AUDIO_L	2
14	ACT3V	3.3	ACT3V	3
13	AUDIO_R	0	AUDIO_R	4
12	V+3V_UCOM	3.3	V+3V_UCOM	5
11	STB3V	3.3	STB3V	6
10	SP_MUTE	3.3	SP_MUTE	7
9	MTXD	3.3	MTXD	8
8	FIELD	0	FIELD	9
7	MRXD	3.3	MRXD	10
6	REM_B	3.3	REM_B	11
5	P_ST_B	0	P_ST_B	12
4	AC_OFF	0	AC_OFF	13
3	REQ	0	REQ	14
2	KEY_B	3.3	KEY_B	15
1	STB_MT	0	STB_MT	16

B AV BOARD ASSY

G FRONT ASSY

CN8653 (AKM1201)		Voltage (V)	CN9502 (AKM1201)	
No.	Name		Name	No.
50	V+9V_A	9	V+9V_A	1
49	V+5V_A	5.0	V+5V_A	2
48	V+3VCOM	3.3	V+3VCOM	3
47	WE_ROM	0.0	WE_ROM	4
46	PC_V	0.0	PC_V	5
45	GND	0.0	GND	6
44	PC_H	0.0	PC_H	7
43	GND	0.0	GND	8
42	NC	–	NC	9
41	GND	0.0	GND	10
40	NC	–	NC	11
39	GND	0.0	GND	12
38	NC	–	NC	13
37	GND	0.0	GND	14
36	GND	0.0	GND	15
35	PC_RCH	4.4	PC_RCH	16
34	GND	0.0	GND	17
33	PC_LCH	4.4	PC_LCH	18
32	GND	0.0	GND	19
31	V4_R	4.4	V4_R	20
30	GND	0.0	GND	21
29	V4_L	4.4	V4_L	22
28	GND	0.0	GND	23
27	GND	0.0	GND	24
26	V4_V	3.9	V4_V	25
25	GND	0.0	GND	26
24	V4_S2	0.1	V4_S2	27
23	V4_SPLUG	4.9	V4_SPLUG	28
22	GND	0.0	GND	29
21	V4_C	4.4	V4_C	30
20	GND	0.0	GND	31
19	V4_Y	3.9	V4_Y	32
18	GND	0.0	GND	33
17	GND	0.0	GND	34
16	NC	–	NC	35
15	NC	–	NC	36
14	GND	0.0	GND	37
13	NC	–	NC	38
12	GND	0.0	GND	39
11	GND	0.0	GND	40
10	Y_COMP4	4.6	Y_COMP4	41
9	GND	0.0	GND	42
8	GND	0.0	GND	43
7	PB_COMP4	4.6	PB_COMP4	44
6	GND	0.0	GND	45
5	GND	0.0	GND	46
4	PR_COMP4	4.6	PR_COMP4	47
3	GND	0.0	GND	48
2	GND	0.0	GND	49
1	COMP_PLUG	0.0	COMP_PLUG	50

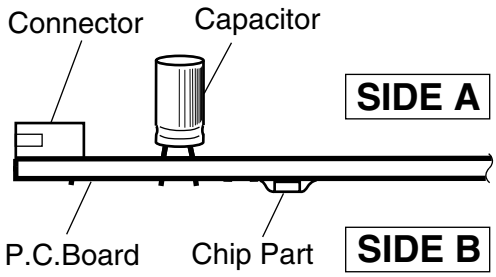
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

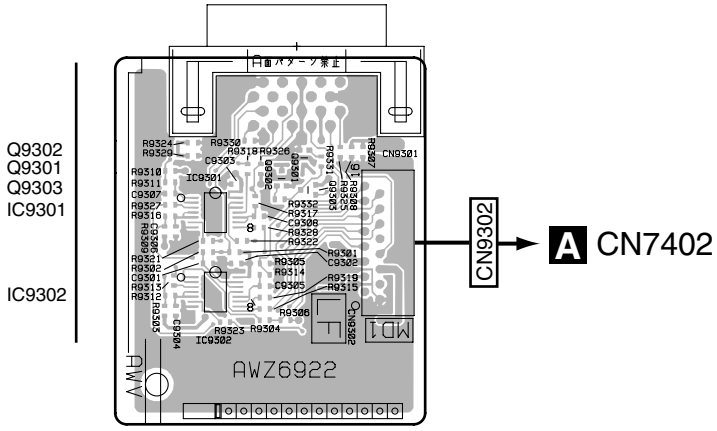
3. The parts mounted on this PCB include all necessary parts fo several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



4.1 SW and MDR ASSYS

SIDE A

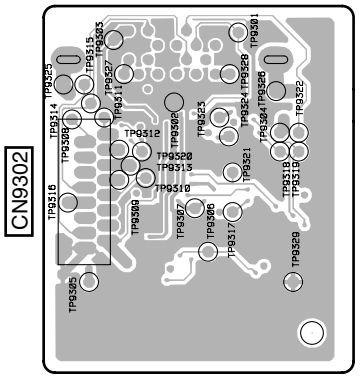
E MDR ASSY



(ANP2092-A)

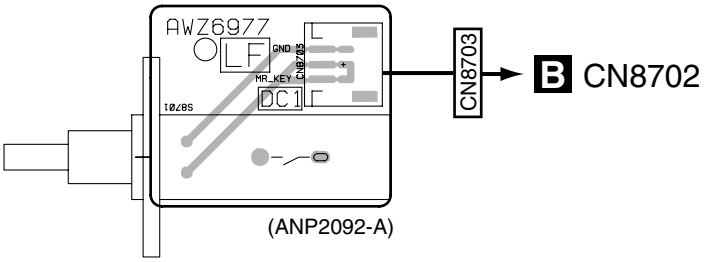
SIDE B

E MDR ASSY



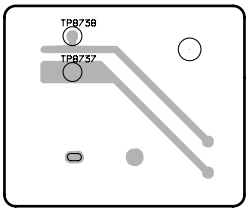
(ANP2092-A)

J SW ASSY



(ANP2092-A)

J SW ASSY



(ANP2092-A)

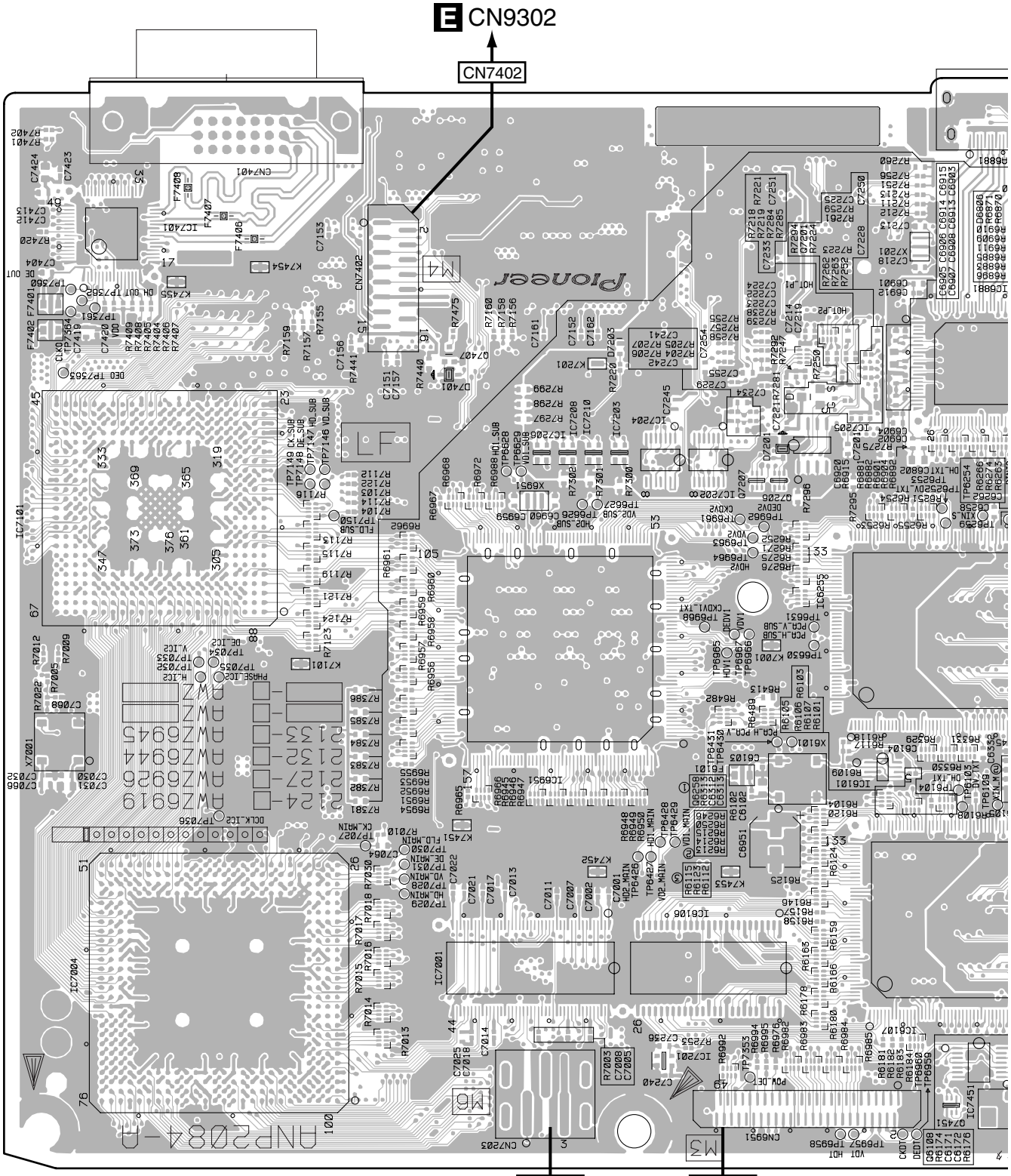
E J

E J

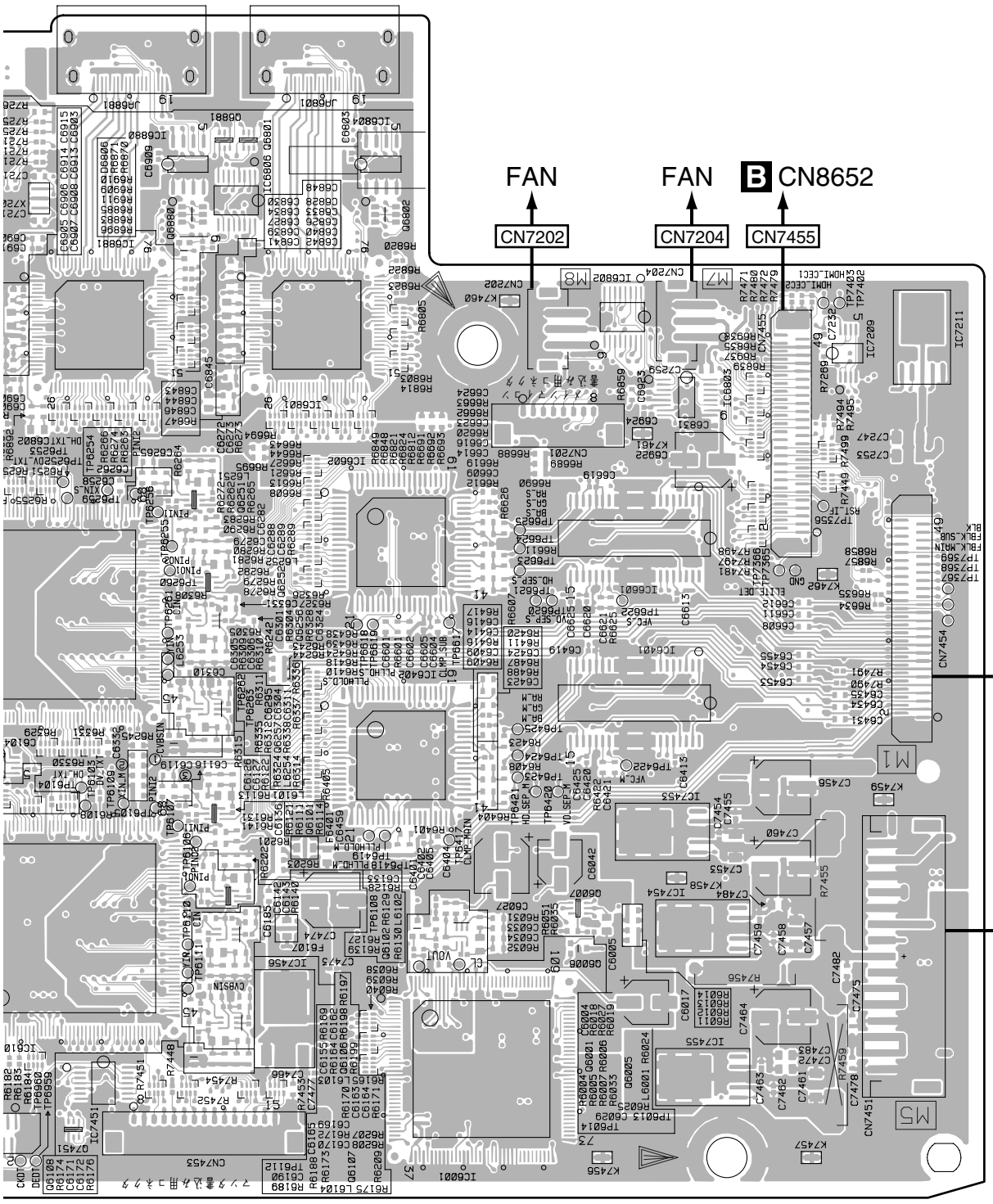
4.2 MR MAIN BOARD ASSY

SIDE A

A MR MAIN BOARD ASSY



SIDE A



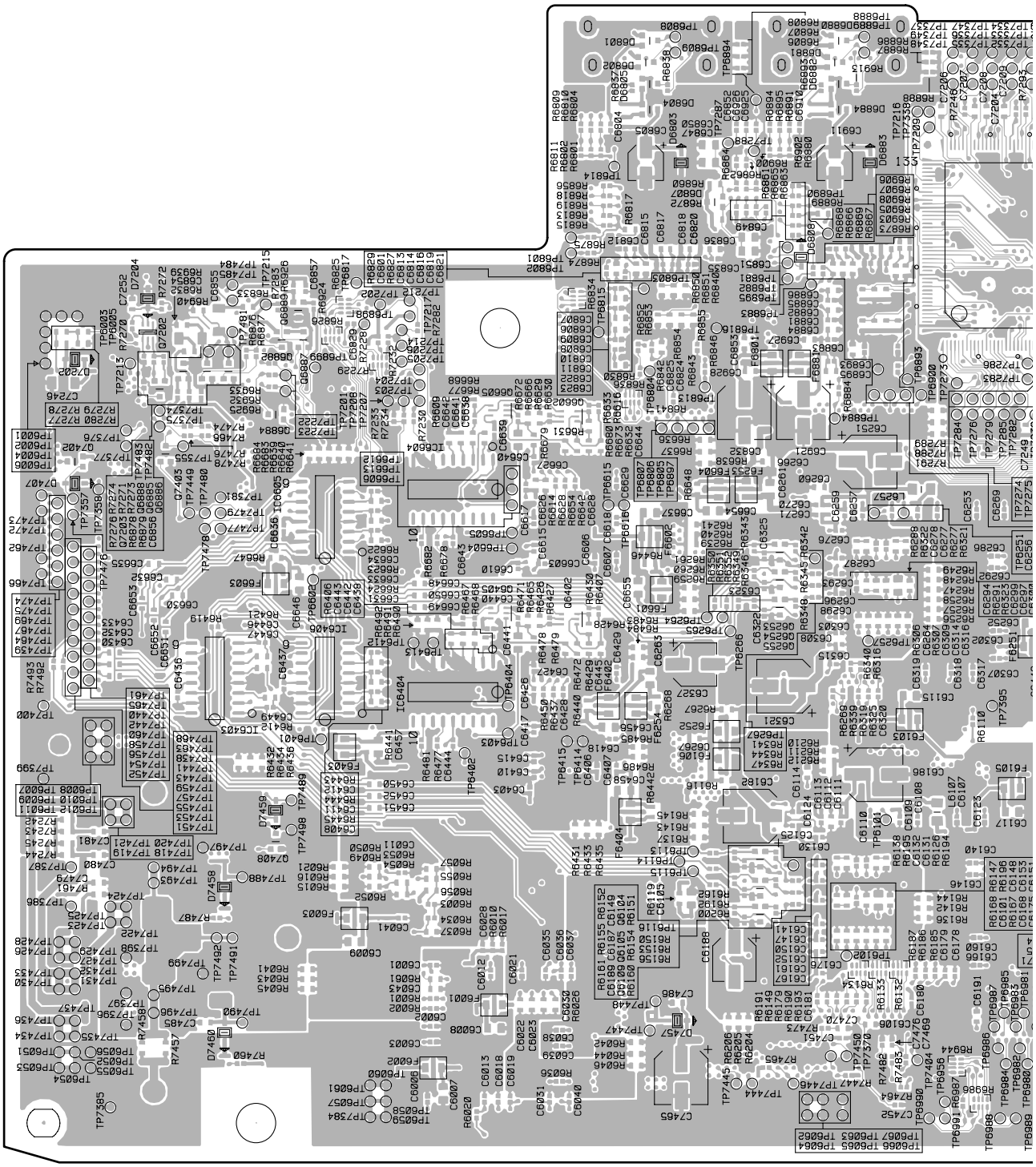
(ANP2084-A)

Q6108 Q7451 Q6880 Q6251 IC7458 Q6106 IC6001 Q6001 Q6005 IC7455 IC7209 IC7211
C6107 IC7451 IC6880 Q6252 Q6101 Q6107 Q6006 IC6601 IC7454 IC6803
IC6881 Q6881 Q6257 IC6602 Q6102 Q6007 IC6401 IC7453
IC6801 Q6256 Q6802 IC6402 IC6802
Q6801 Q6806 IC6804

A

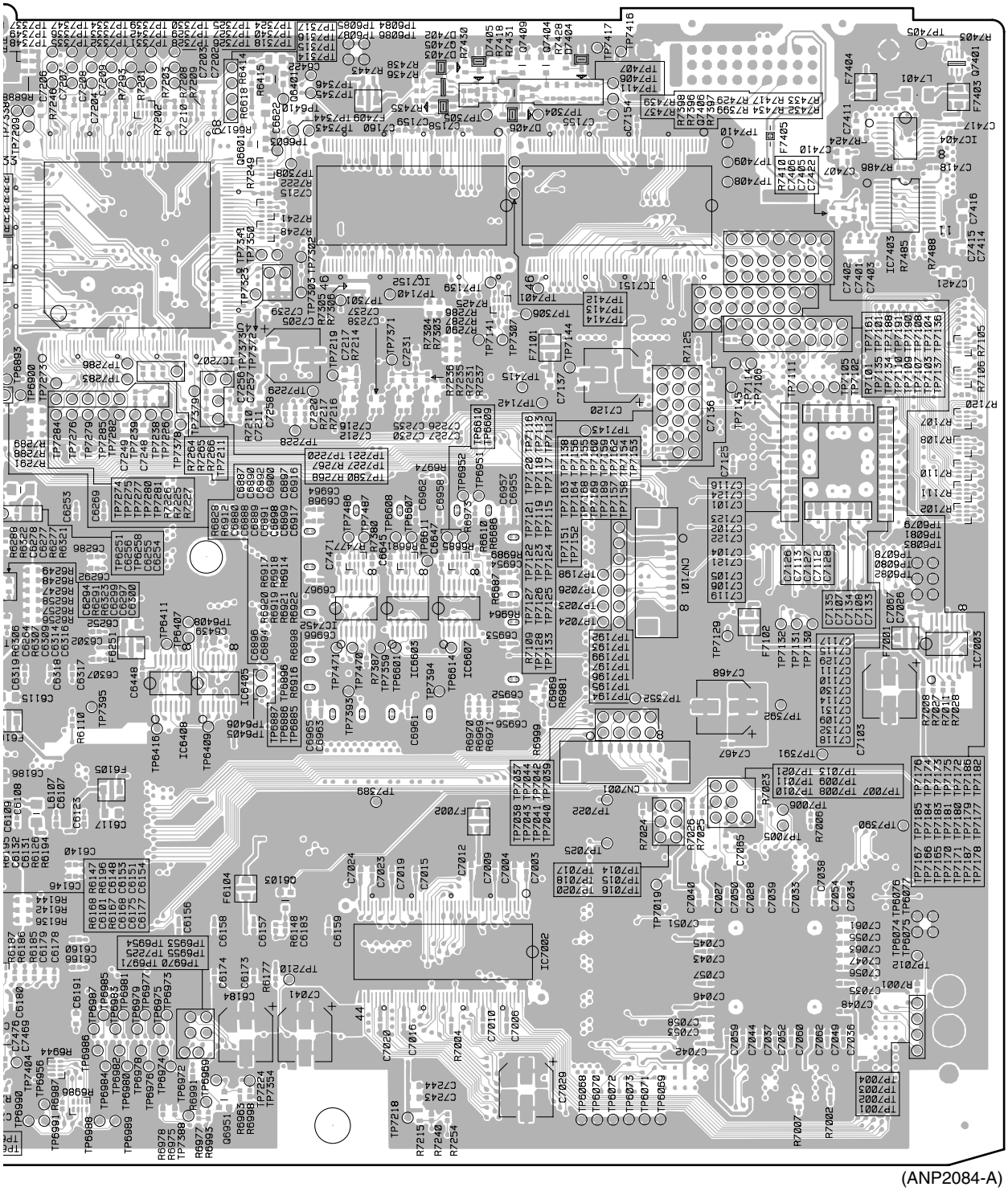
SIDE B

A MR MAIN BOARD ASSY



Q7402 Q6886 Q7408 IC6406 IC6404 Q6405 Q6402 Q6109 Q6255
Q7203 Q7202 IC6403 Q6884 Q6887 IC6604 Q6605 Q6602 Q6105 Q6254
Q7403 Q6889 IC6605 Q6104 Q6253
Q6882

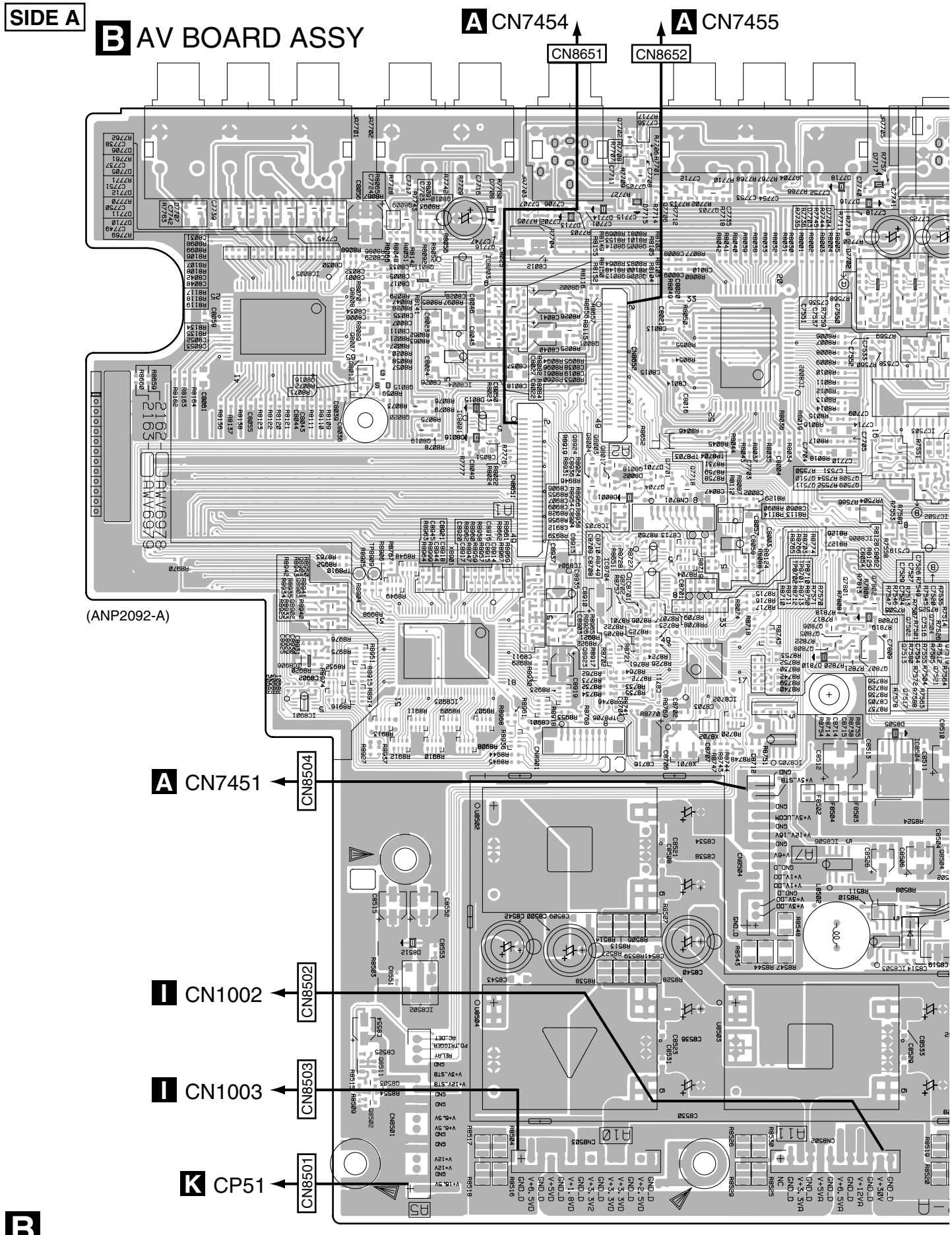
SIDE B



(ANP2084-A)

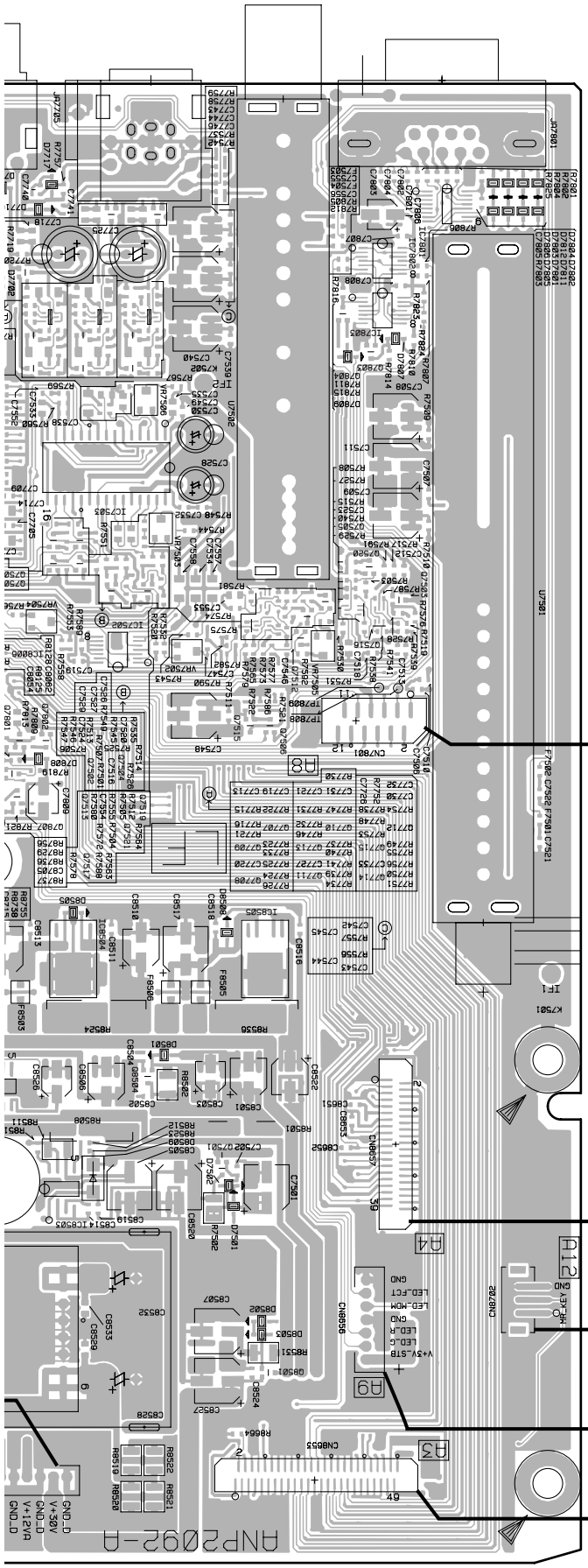
IC6408 Q6103 IC6603 IC6607 IC7002 IC7151 Q7406 IC7403 IC7003
IC6405 IC7452 IC7152 IC7404
IC7207 Q6601 Q6401 Q7405 Q7409 Q7404 Q7401

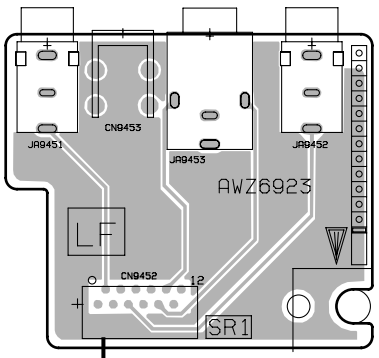
4.3 AV BOARD and SR ASSY



F SR ASSY

SIDE A





CN9452 (ANP2092-A)

CN7801

Q7702

IC7801 IC7802 Q7705 Q7706 Q7703 Q8010 Q8009

IC8003 IC8005 IC7803 Q8005 Q8014 Q8013 Q8006 Q8002 Q7716 Q8011 Q8008

IC8002 IC8004 Q7803 Q7804 Q8001 Q8007 Q8012 Q8016 Q8015 VR7506

IC8001 IC7503 Q8020 Q8924 Q7505 Q7520 Q8018 Q7503 Q8019 Q8004 Q7701 Q7718 Q7508 Q7704 Q7509 Q8003 Q8017 Q7510 Q7511 VR7503

IC7502 IC8703 IC8006 IC8904 IC8704 Q7516 VR7504

IC8701 Q8904 Q7512 Q7801 Q8702 Q8903 Q7515 Q7802 Q7506 Q8902 VR7502

CN7801

IC8906 IC8702 IC8903 IC8901 IC8505 IC8504 IC8705 Q7504 Q7502 Q7513 Q7806 Q7519 Q7805 Q7707 Q7808 Q8923 Q7710 Q7521 Q7807 Q7709 Q7517 Q7715 Q7713 Q7714 Q7711 Q7708

IC8506

Q8504

Q7501

IC8503

CN8657 → I CN1001

IC8502

CN8702 → J CN8703

Q8511 Q8501 Q8503

CN8656 → H CN9651

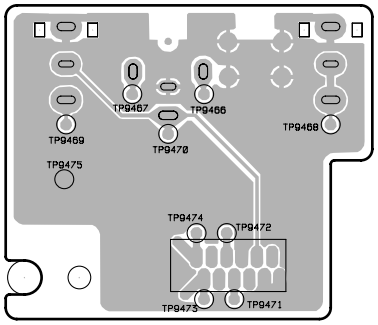
Q8502

CN8653 → G CN9502

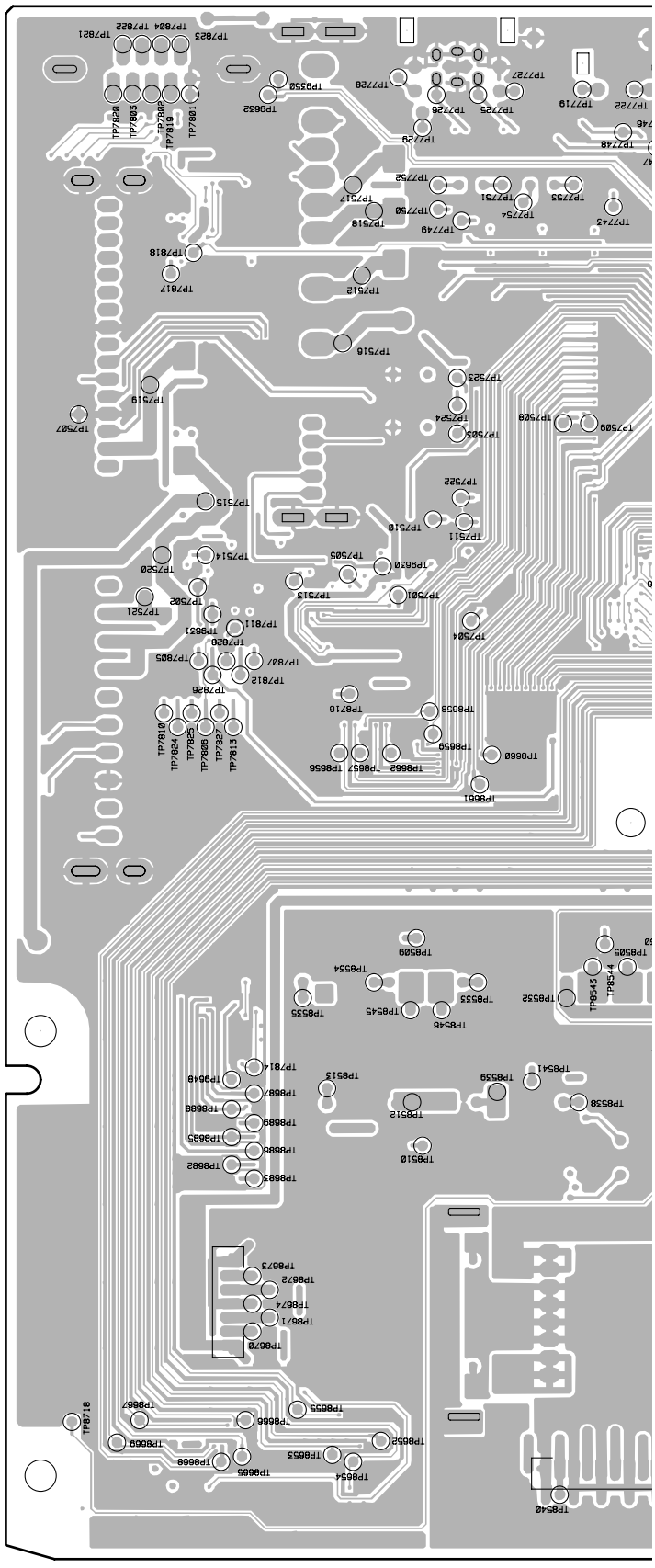
B F

SIDE B

F SR ASSY

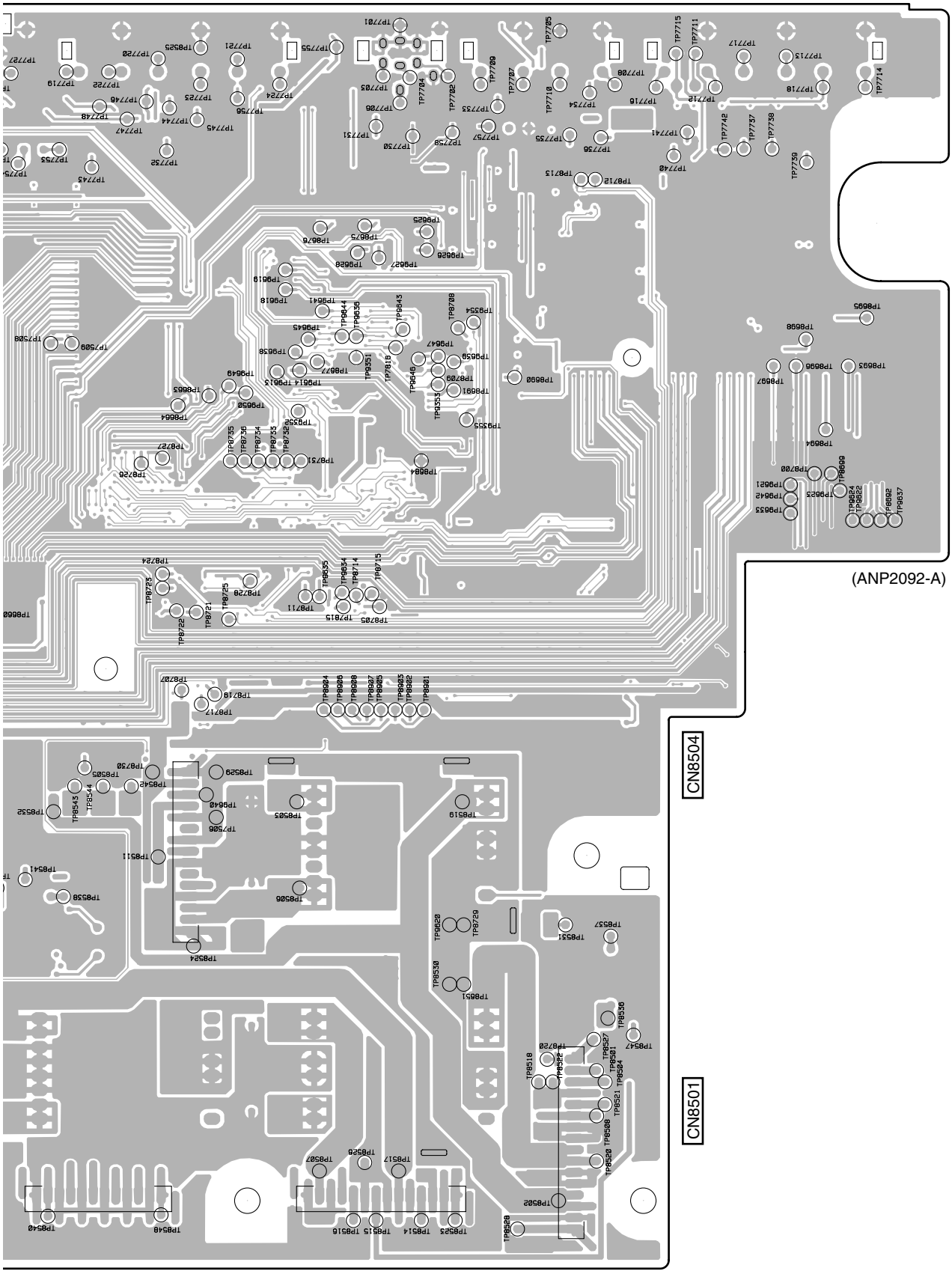


(ANP2092-A) CN9452



SIDE B

B AV BOARD ASSY



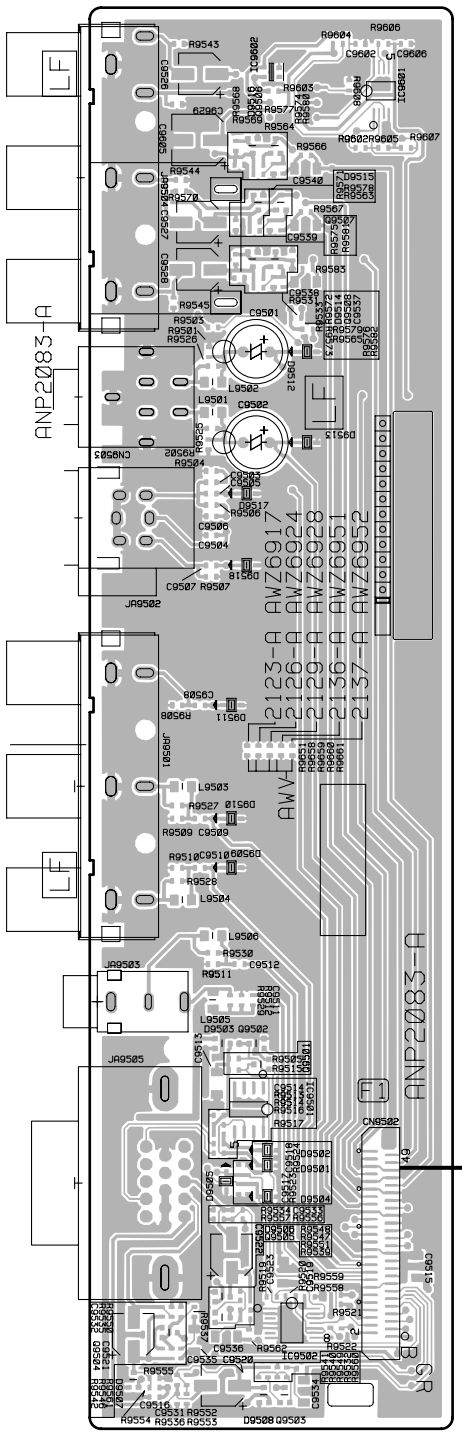
(ANP2092-A)

4.4 FRONT and LED ASSY

SIDE A

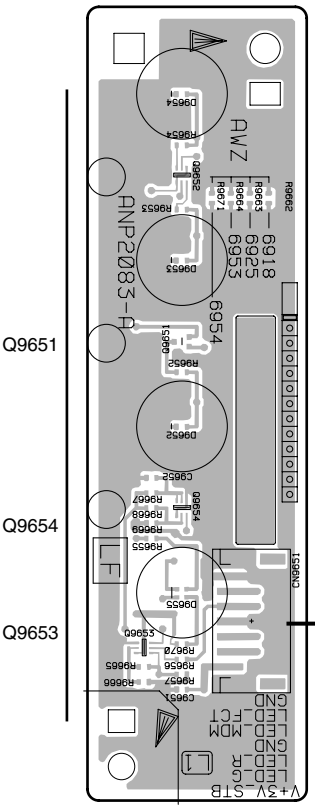
SIDE A

G FRONT ASSY



(ANP2083-A)

H LED ASSY



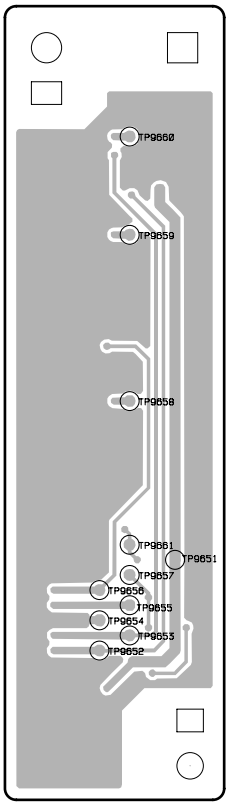
(ANP2083-A)

G H

G H

SIDE B

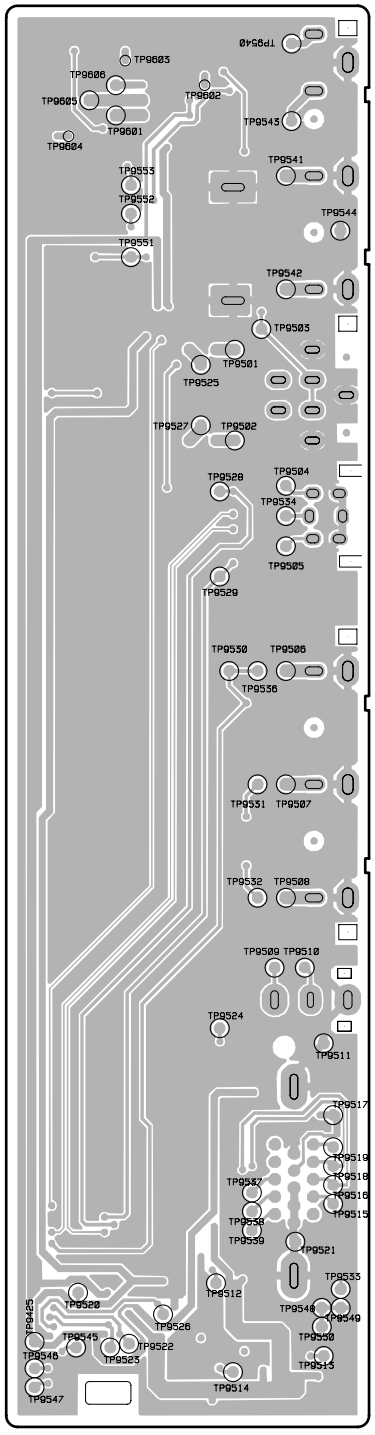
H LED ASSY



(ANP2083-A)

SIDE B

G FRONT ASSY



(ANP2083-A)

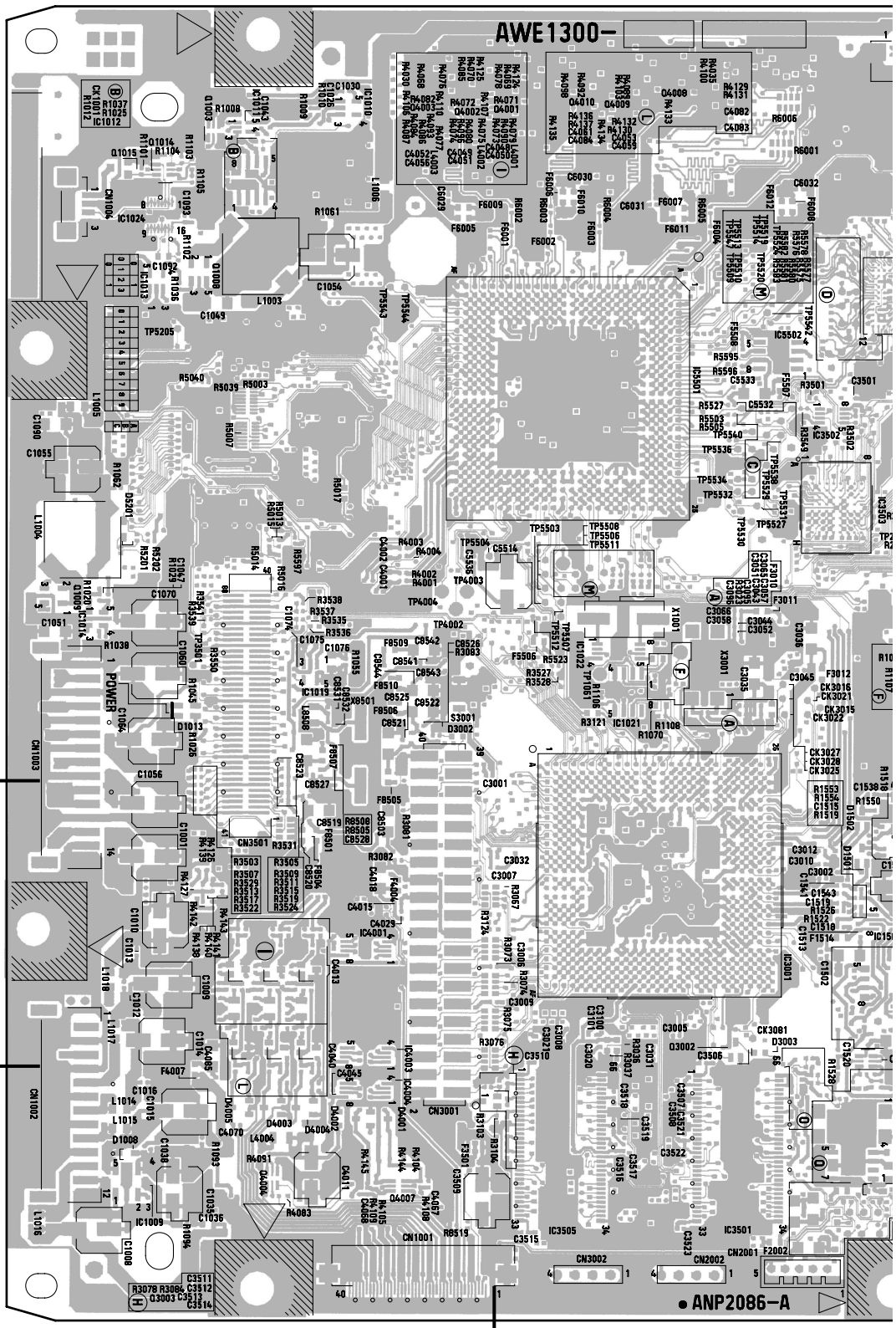
A B C D E F

G H

4.5 TUNER BOARD ASSY

SIDE A

I TUNER BOARD ASSY



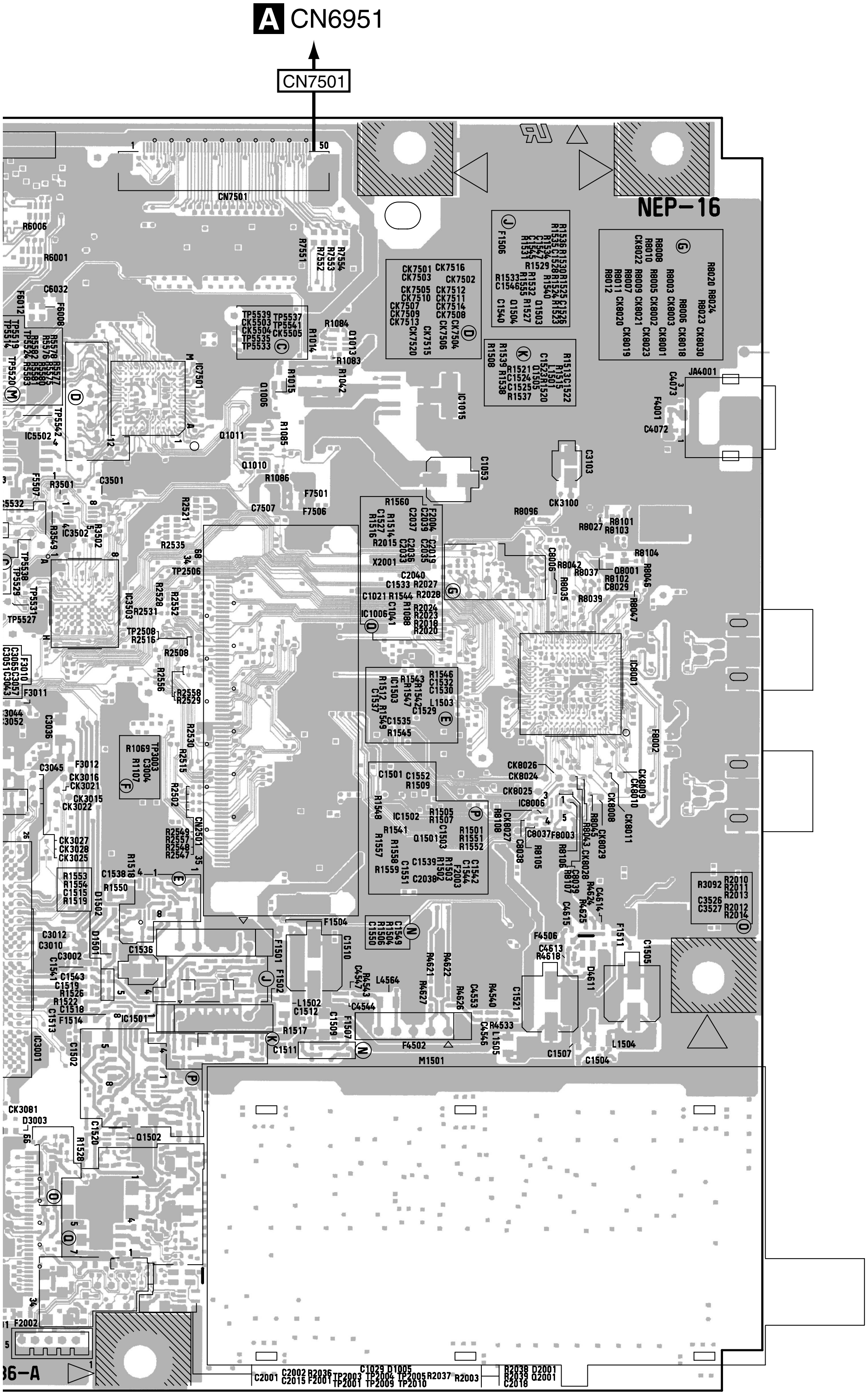
B CN8503 ← CN1003

B CN8502 ← CN1002

CN1001 → B CN8657

SIDE A

A



(ANP2086-B)

Q4001 IC1010
Q4002 IC1011
Q4003 IC1012
Q1003 Q4008
Q4009
Q1014
Q4010
Q1015

B

Q1503
Q1504
IC1024
Q1013
IC7501
Q1505
Q1008
Q1006 IC1015
IC1013
IC5502
Q1011

Q1010
IC5501

IC3502

C

IC3503

IC1006

IC8001
Q1009
IC1503
IC1014

IC1022

IC1019
IC8006
IC1021
IC1502
Q1501

D

IC1501
IC4001
IC3001

E

IC4003
Q1502
IC4004

Q4004

IC3501
IC1009
IC3505

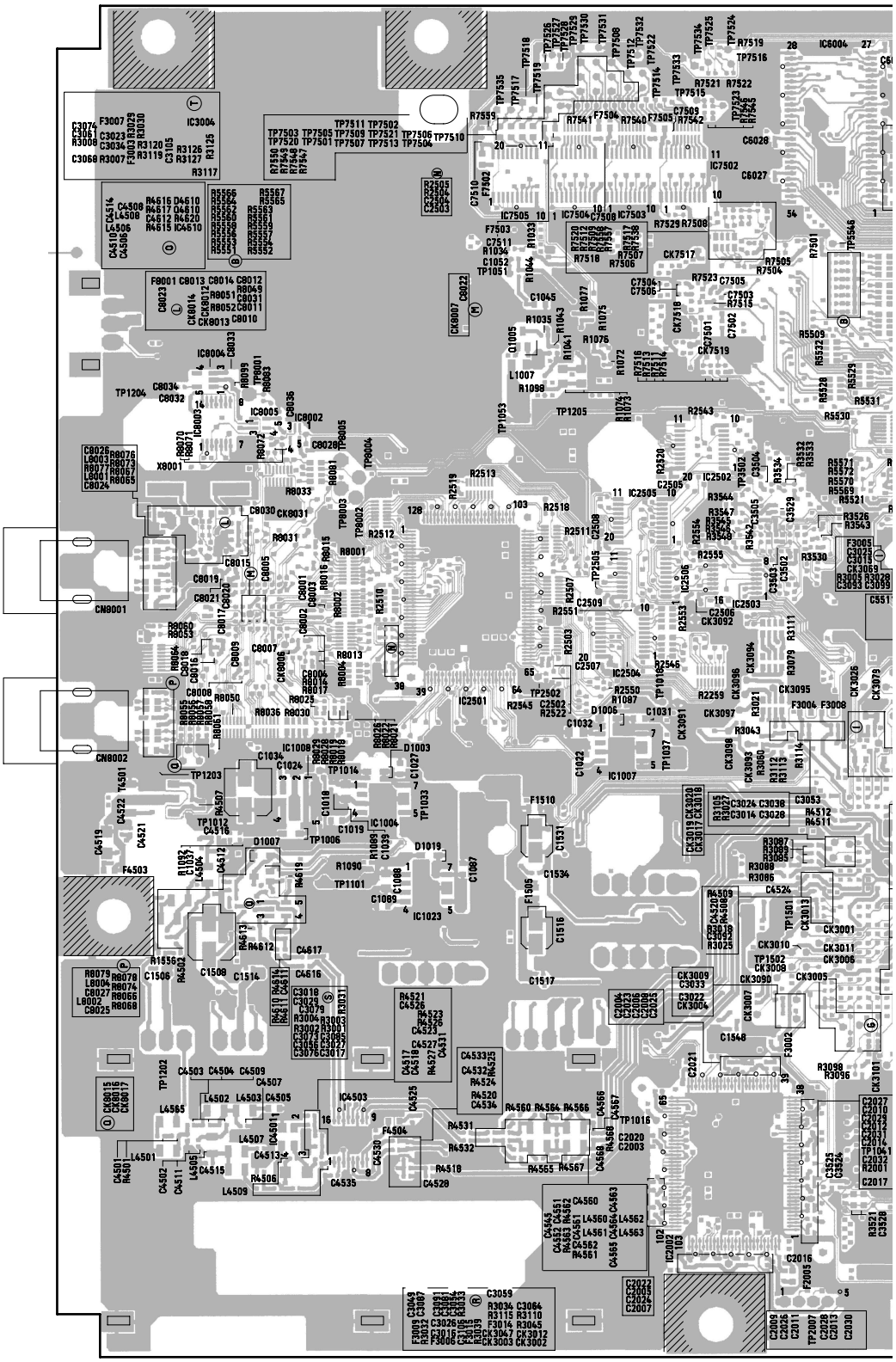
Q3003
Q2001

F

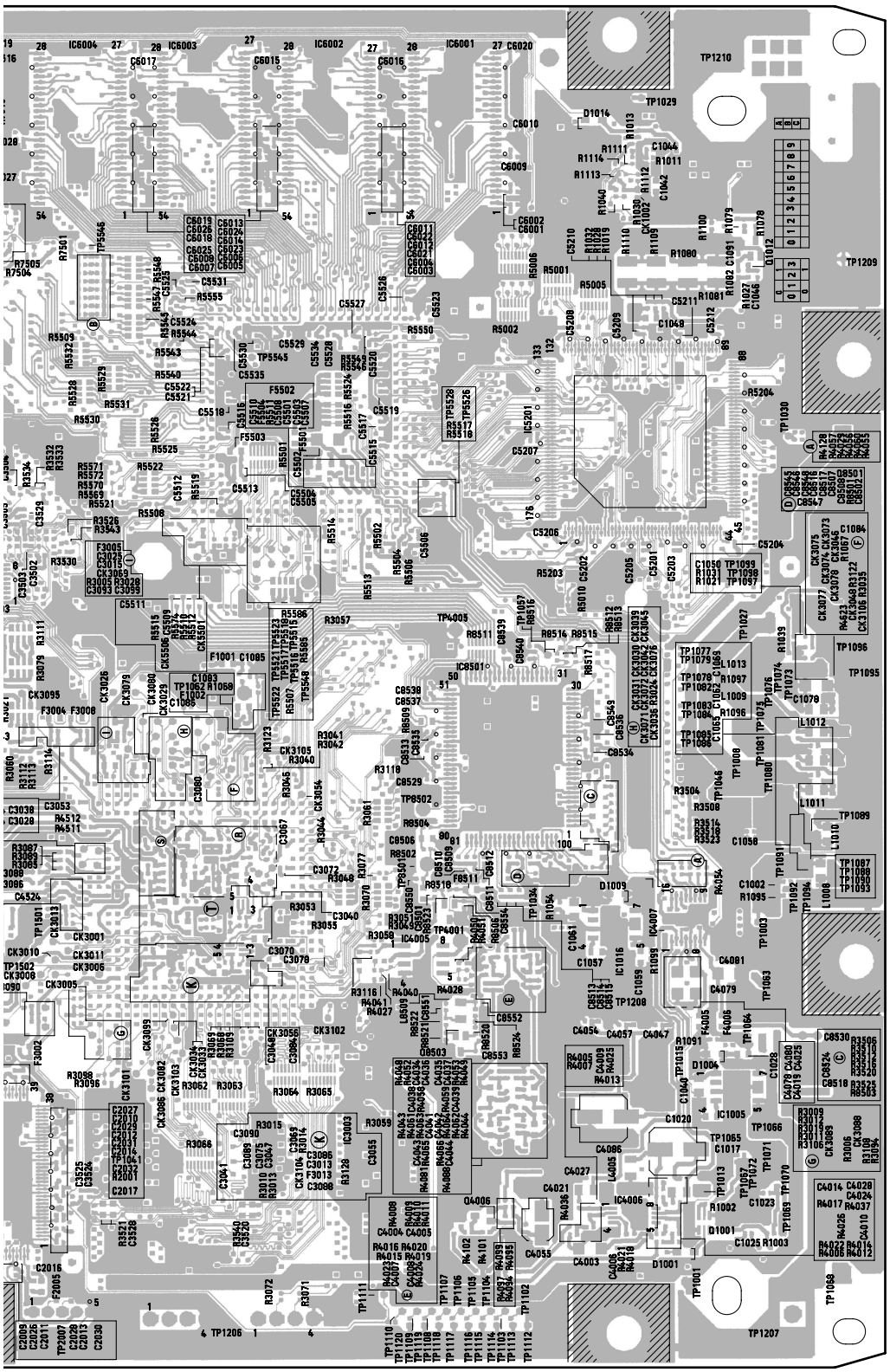
SIDE B

TUNER BOARD ASSY

IC6001
IC6002
IC6003
IC6004
IC3004
IC7502
IC7503
IC4610
IC7504
IC7505
Q1012
IC8004
Q1005
IC8003
IC5201 IC8005
IC8002
IC2502
IC2505
IC2506
IC2503
IC8501
IC2504
IC2501
IC1008
IC1007
IC1004
IC1023
IC4007
IC4005
IC1016
Q8503
IC4503
IC4005
IC3003
IC4501
Q4006
IC4006
Q1001
IC2002



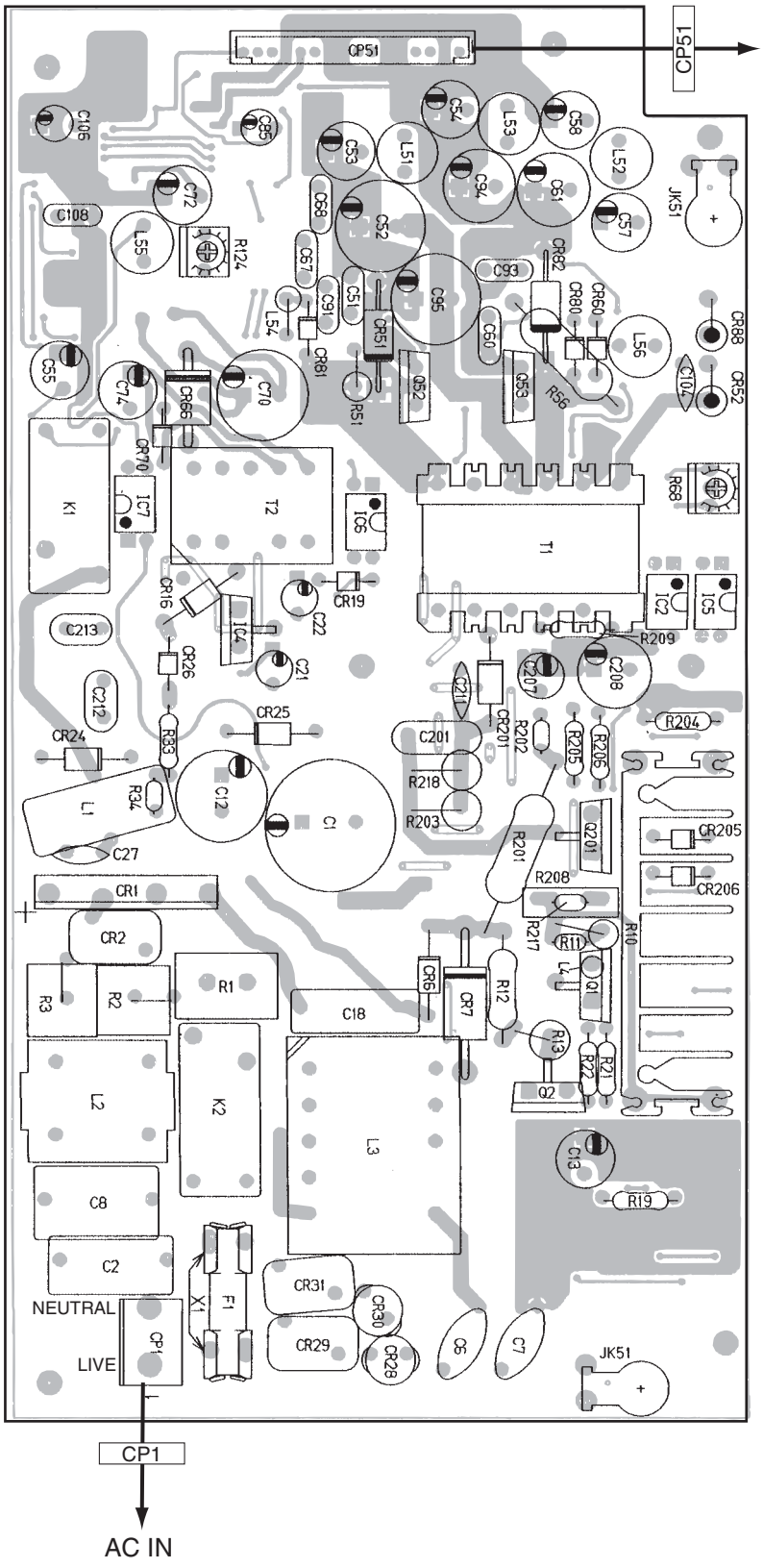
SIDE B



(ANP2086-B)

4.6 POWER SUPPLY UNIT

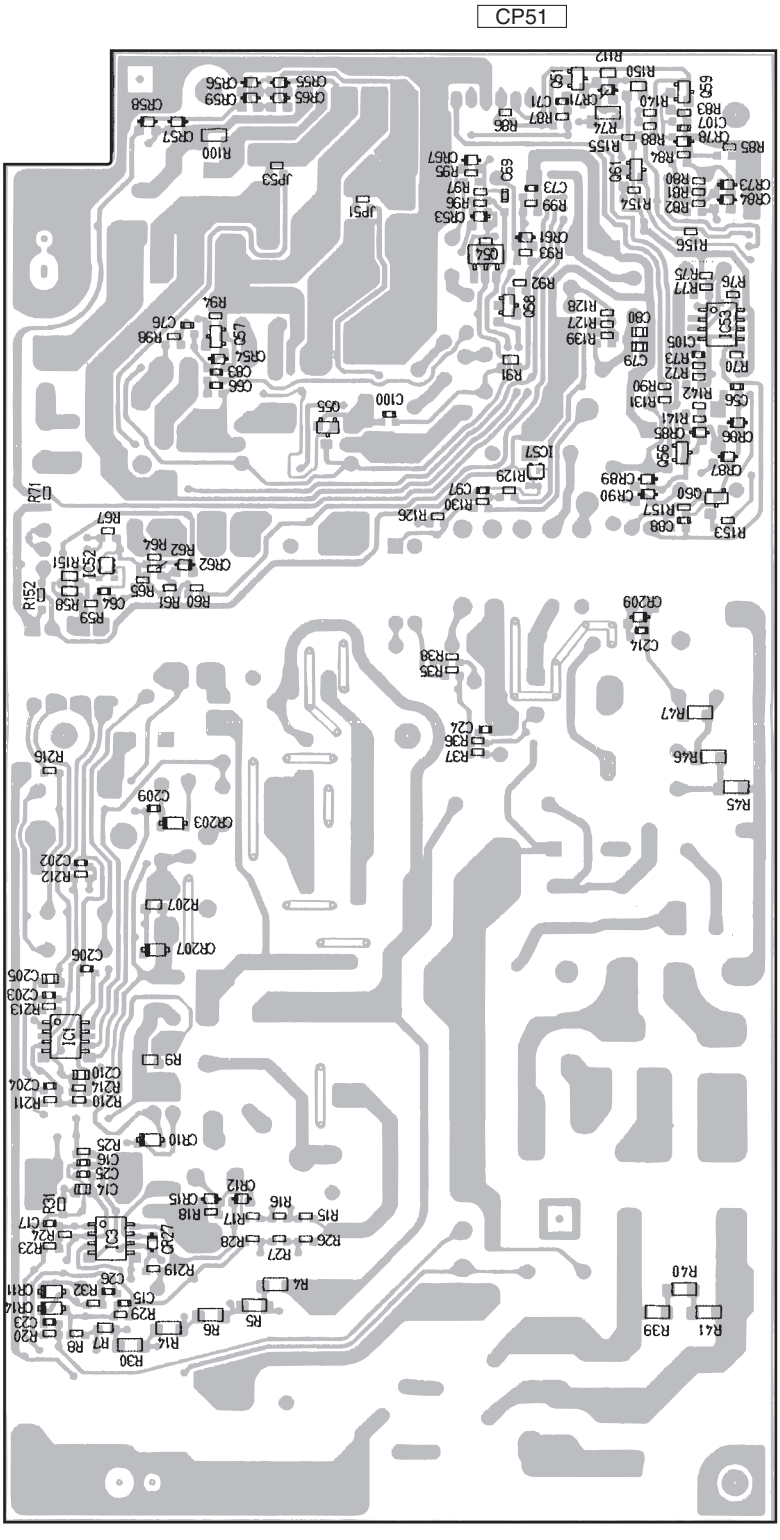
SIDE A **K** POWER SUPPLY UNIT **SIDE A**



SIDE B

K POWER SUPPLY UNIT

SIDE B



5. PCB PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 x 10[1] → 561 ..... RD1/4PU[5][6][1]J
47k Ω → 47 x 10[3] → 473 ..... RD1/4PU[4][7][3]J
0.5 Ω → R50 ..... RN2H[R][5][0]K
1 Ω → 1R0 ..... RS1P[1][R][0]K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 x 10[1] → 5621 ..... RN1/4PC[5][6][2][1]F

• LIST OF ASSEMBLIES

Mark	Symbol and Description	PDP-R05U/ KUC	PRO-R05U/ KUC
NSP	1..MR AV BOARD ASSY	AWV2162	AWV2163
	2..AV BOARD ASSY	AWZ6978	AWZ6979
	2..MDR ASSY	AWZ6922	AWZ6922
	2..SR ASSY	AWZ6923	AWZ6923
	2..SW ASSY	AWZ6977	AWZ6977
NSP	1..MR FUKUGOU BOARD ASSY	AWV2126	AWV2129
	2..FRONT ASSY	AWZ6924	AWZ6928
	2..LED ASSY	AWZ6925	AWZ6925
NSP	1..MR MAIN BOARD ASSY	AWV2127	AWV2127
	2..MAIN BOARD ASSY	AWZ6926	AWZ6926
	1..TUNER BOARD ASSY	AWE1300	AWE1300
⚠	1..POWER SUPPLY UNIT	AXY1091	AXY1091

• CONTRAST OF PCB ASSEMBLIES

B AV BOARD ASSY

AWZ6978 and AWZ6979 are constructed the same except for the following:

Mark	Symbol and Description	AWZ6978	AWZ6979
	R8652	RS1/16S102J	Not used
	R8659	RS1/16S0R0J	Not used
	R8660	Not used	RS1/16S0R0J
	JA7701 6P PIN JACK	AKB1297	AKB1298
	JA7702 4P PIN JACK	AKB1313	AKB1302
	JA7703 PINJACK+MINI DIN 4P	AKB1314	AKB1309
	JA7704 6P PIN JACK	AKB1295	AKB1312
	JA7705 2P 4 PIN MINI DIN (S)	AKP1234	AKP1235

G FRONT ASSY

AWZ6924 and AWZ6928 are constructed the same except for the following:

Mark	Symbol and Description	AWZ6924	AWZ6928
	R9658	RS1/16S0R0J	Not used
	R9659	Not used	RS1/16S0R0J
	JA9501 4P PIN JACK	AKB1303	AKB1304
	JA9502 4P MINI DIN (S)	AKP1238	AKP1239
	JA9504 3P PIN JACK	AKB1305	AKB1306

• PCB PARTS LIST (PDP-R05U)

Mark	No.	Description	Part No.

A MR MAIN BOARD ASSY

[GCR BLOCK]

RESISTORS

R6011-R6016,R6021,R6041,R6043	RS1/16S0R0J
R6045	RS1/16S0R0J

[MICHEL MAIN BLOCK]

SEMICONDUCTORS

IC6107	PD0278A
IC6101	TC7W126FU
Q6108	2SA1586
Q6101,Q6102	HN1A01FU
Q6106,Q6107	HN1B04FU

COILS AND FILTERS

F6101,F6103,F6105-F6107 EMI FILTER	CCG1162
L6107	LCTAW220J2520
L6101-L6104	LCYC6R8K2125

CAPACITORS

C6102 (10/6.3)	ACG7046
C6126,C6142,C6163,C6164	CCSRCH330J50
C6171,C6172	CCSRCH330J50
C6127,C6143	CCSRCH680J50
C6182,C6186	CEHVKW101M6R3
C6188	CEHVKW470M6R3
C6151	CKSQYB225K10
C6112,C6114	CKSRYB102K50
C6119,C6136,C6153,C6154	CKSRYB104K16
C6168,C6169,C6177,C6185	CKSRYB104K16
C6101,C6155,C6175,C6190	CKSRYB105K6R3
C6103,C6104,C6107-C6111,C6113	CKSSYF104Z16
C6116,C6123-C6125,C6130-C6133	CKSSYF104Z16
C6140,C6141,C6146-C6148,C6150	CKSSYF104Z16
C6152,C6160-C6162,C6165-C6167	CKSSYF104Z16
C6170,C6176,C6178-C6181	CKSSYF104Z16

RESISTORS

R6101,R6104-R6106,R6120	RAB4CQ100J
R6124,R6125	RAB4CQ100J
R6136,R6137,R6142-R6145	RS1/16S0R0J
R6194-R6196	RS1/16S1000F
R6115,R6131	RS1/16S100J
R6197,R6207	RS1/16S103J
R6147	RS1/16S1301F
R6198,R6208	RS1/16S183J
R6113,R6129	RS1/16S221J
R6126,R6138	RS1/16S2701F
R6112,R6123,R6128,R6141,R6165	RS1/16S271J
R6175	RS1/16S271J
R6170,R6171,R6174,R6176	RS1/16S331J
R6169,R6172,R6189	RS1/16S471J
R6122,R6140	RS1/16S473J
R6167,R6168	RS1/16S8201F
Other Resistors	RS1/16SS###J

OTHERS

X6101 CRYSTAL OSCILLATOR (27MHz)	ASS1175

Mark	No.	Description	Part No.

SEMICONDUCTORS

IC6106	HY57V161610ETP-8
Q6104,Q6105,Q6109	2SA1586
Q6103	RN1303

COILS AND FILTERS

F6104	CCG1162

CAPACITORS

C6266,C6267	CCSRCH470J50
C6184	CEHVKW101M6R3
C6149,C6156-C6159,C6173,C6174	CKSSYF104Z16
C6183,C6187,C6189	CKSSYF104Z16

RESISTORS

R6132-R6134	RAB4CQ103J
R6146,R6159,R6163,R6166,R6178	RAB4CQ330J
R6180,R6184	RAB4CQ330J
Other Resistors	RS1/16SS###J

[MICHEL SUB BLOCK]

SEMICONDUCTORS

IC6255	PD0278A
Q6258	2SA1586
Q6251,Q6252	HN1A01FU
Q6256,Q6257	HN1B04FU

COILS AND FILTERS

F6251-F6254 EMI FILTER	CCG1162
L6257	LCTAW220J2520
L6251-L6254	LCYC6R8K2125

CAPACITORS

C6272,C6288,C6305,C6306	CCSRCH330J50
C6312,C6313	CCSRCH330J50
C6273,C6289	CCSRCH680J50
C6251,C6321	CEHVKW101M6R3
C6327	CEHVKW470M6R3
C6297	CKSQYB225K10
C6258,C6260	CKSRYB102K50
C6265,C6282,C6299,C6300	CKSRYB104K16
C6309,C6310,C6316,C6324	CKSRYB104K16
C6264,C6295,C6301,C6314	CKSRYB105K6R3
C6253-C6257,C6259,C6262	CKSSYF104Z16
C6269-C6271,C6276-C6279	CKSSYF104Z16
C6286,C6287,C6292-C6294,C6296	CKSSYF104Z16
C6298,C6302-C6304,C6307,C6308	CKSSYF104Z16
C6311,C6315,C6317-C6320,C6331	CKSSYF104Z16

RESISTORS

R6251-R6254,R6271,R6275,R6276	RAB4CQ100J
R6329-R6331	RAB4CQ103J
R6256-R6261	RS1/16S0R0J
R6321-R6323	RS1/16S1000F
R6266,R6283	RS1/16S100J
R6326,R6336	RS1/16S103J
R6291	RS1/16S1301F
R6327,R6337	RS1/16S183J
R6264,R6281	RS1/16S221J
R6277,R6288	RS1/16S2701F
R6263,R6274,R6280,R6290,R6305	RS1/16S271J
R6314	RS1/16S271J
R6309,R6310,R6313,R6315	RS1/16S331J

Mark No.	Description	Part No.
	R6308,R6311,R6335	RS1/16S471J
	R6273,R6289	RS1/16S473J
	R6306,R6307	RS1/16S8201F
	Other Resistors	RS1/16SS###J
	[AD MAIN BLOCK]	
	SEMICONDUCTORS	
	IC6402	AD80058
	IC6404	BA7078AF
	IC6401	SM5301BS
	IC6405,IC6408	TC74VHC126FT
	Q6405	HN1B04FU
	Q6401	RN1303
	COILS AND FILTERS	
	F6401-F6404 EMI FILTER	CCG1162
	CAPACITORS	
	C6422,C6441 (10/6.3)	ACG7046
	C6445	CCSRCH151J50
	C6438	CKSRYB103K50
	C6404,C6424	CKSRYB104K16
	C6408,C6411,C6412,C6421,C6431	CKSRYB105K6R3
	C6434,C6435	CKSRYB105K6R3
	C6409,C6414,C6423	CKSRYB473K16
	C6443	CKSRYB474K10
	C6442	CKSRYB562K50
	C6402	CKSRYB822K50
	C6401	CKSRYB823K16
	C6403,C6405-C6407,C6410,C6413	CKSSYF104Z16
	C6415-C6420,C6425-C6429	CKSSYF104Z16
	C6439,C6440,C6444,C6448	CKSSYF104Z16
	RESISTORS	
	R6482,R6489	RAB4CQ101J
	R6405,R6410,R6418,R6424	RAB4CQ330J
	R6438,R6439	RAB4CQ330J
	R6420,R6431-R6436	RS1/16S0R0J
	R6404,R6408,R6409,R6416,R6417	RS1/16S1000F
	R6423	RS1/16S1000F
	R6406	RS1/16S104J
	R6422	RS1/16S1101F
	R6478	RS1/16S153J
	R6472	RS1/16S221J
	R6479	RS1/16S222J
	R6414	RS1/16S224J
	R6401	RS1/16S2701F
	R6413	RS1/16S472J
	R6465	RS1/16S682J
	Other Resistors	RS1/16SS###J
	SEMICONDUCTORS	
	IC6406	MM1389XFBE
	CAPACITORS	
	C6450-C6455	CKSRYB105K6R3
	C6437	CKSSYF104Z16
	RESISTORS	
	All Resistors	RS1/16SS###J

Mark No.	Description	Part No.
	[AD SUB BLOCK]	
	SEMICONDUCTORS	
	IC6602	AD80058
	IC6604	BA7078AF
	IC6601	SM5301BS
	IC6603,IC6607	TC74VHC126FT
	Q6605	HN1B04FU
	Q6601	RN1303
	COILS AND FILTERS	
	F6601-F6604 EMI FILTER	CCG1162
	CAPACITORS	
	C6622,C6640 (10/6.3)	ACG7046
	C6644	CCSRCH151J50
	C6638	CKSRYB103K50
	C6604,C6624	CKSRYB104K16
	C6608,C6611,C6612,C6621,C6631	CKSRYB105K6R3
	C6633,C6634	CKSRYB105K6R3
	C6609,C6614,C6623	CKSRYB473K16
	C6642	CKSRYB474K10
	C6641	CKSRYB562K50
	C6602	CKSRYB822K50
	C6601	CKSRYB823K16
	C6603,C6605-C6607,C6610,C6613	CKSSYF104Z16
	C6615-C6620,C6625-C6629,C6639	CKSSYF104Z16
	C6643,C6645,C6647	CKSSYF104Z16
	RESISTORS	
	R6681,R6685	RAB4CQ101J
	R6608,R6613,R6621,R6627	RAB4CQ330J
	R6643,R6644	RAB4CQ330J
	R6628,R6636-R6641	RS1/16S0R0J
	R6607,R6611,R6612,R6619,R6620	RS1/16S1000F
	R6626	RS1/16S1000F
	R6609	RS1/16S104J
	R6625	RS1/16S1101F
	R6679	RS1/16S153J
	R6673	RS1/16S221J
	R6680	RS1/16S222J
	R6617	RS1/16S224J
	R6601	RS1/16S2701F
	R6610	RS1/16S472J
	R6666	RS1/16S682J
	Other Resistors	RS1/16SS###J
	[HDMI RX BLOCK]	
	SEMICONDUCTORS	
	IC6880	BR24L02FJ-W
	IC6803	PCM1742KE
	IC6881	SII9993CTG100
	IC6806	TC74HC4538AFT
	Q6888,Q6889	2SA1586
	Q6885,Q6886	2SC4116
	Q6884,Q6887	RN1303
	Q6881	RN1902
	Q6882	RN2303
	Q6880	SM6K2
	D6880,D6881	1SS302
	D6808	1SS355

Mark	No.	Description	Part No.
	D6806,D6807,D6884		DAN202U
	D6883		UDZS6R8(B)
COILS AND FILTERS			
	F6881	EMI FILTER	CCG1162
CAPACITORS			
	C6802,C6849,C6851 (10/6.3)		ACG7046
	C6880,C6882,C6884,C6886		CCSRCH101J50
	C6888,C6889,C6892,C6895,C6896		CCSRCH101J50
	C6899-C6902,C6905,C6906,C6915		CCSRCH101J50
	C6917		CCSRCH101J50
	C6927,C6928		CCSRCH221J50
	C6921,C6922		CEHVKW101M6R3
	C6911		CEHVKW220M6R3
	C6913		CKSRYB104K16
	C6920		CKSRYB473K16
	C6831,C6848,C6856,C6857,C6881		CKSSYF104Z16
	C6883,C6885,C6887,C6890,C6891		CKSSYF104Z16
	C6893,C6894,C6897,C6898		CKSSYF104Z16
	C6903,C6904,C6907-C6910,C6912		CKSSYF104Z16
	C6916,C6923-C6926		CKSSYF104Z16
	C6854,C6855 (10uF/16V)		DCH1165
RESISTORS			
	R6881-R6883,R6885,R6892,R6896		RAB4CQ101J
	R6901,R6904		RAB4CQ101J
	R6859		RS1/16S0R0J
	R6939,R6940		RS1/16S104J
	R6832,R6833		RS1/16S222J
	R6889		RS1/16S3900F
	R6915		RS1/16S3901F
	R6872		RS1/16S473J
	Other Resistors		RS1/16SS###J
OTHERS			
	JA6881	HDMI CONNECTOR	AKP1232
SEMICONDUCTORS			
	IC6804		BR24L02FJ-W
	IC6801		SII9993CTG100
	IC6802		TC74VHC157FT
	Q6801		RN1902
	Q6802		SM6K2
	D6801,D6802		1SS302
	D6804		DAN202U
	D6803		UDZS6R8(B)
COILS AND FILTERS			
	F6801	EMI FILTER	CCG1162
CAPACITORS			
	C6845,C6847,C6850 (10/6.3)		ACG7046
	C6801,C6806,C6808,C6810		CCSRCH101J50
	C6813,C6814,C6817,C6818,C6820		CCSRCH101J50
	C6823,C6824,C6830,C6834,C6836		CCSRCH101J50
	C6839,C6841,C6844		CCSRCH101J50
	C6832		CEHVKW101M6R3
	C6805		CEHVKW220M6R3
	C6826		CKSRYB104K16
	C6846		CKSRYB473K16
	C6803,C6804,C6807,C6809		CKSSYF104Z16

Mark	No.	Description	Part No.
	C6811,C6812,C6815,C6816,C6819		CKSSYF104Z16
	C6821,C6822,C6825,C6828,C6829		CKSSYF104Z16
	C6833,C6835,C6840,C6842,C6843		CKSSYF104Z16
	C6852		CKSSYF104Z16
RESISTORS			
	R6825,R6849		RAB4CQ101J
	R6848		RAB4CQ220J
	R6803,R6805,R6812,R6814,R6821		RAB4CQ470J
	R6824		RAB4CQ470J
	R6817		RS1/16S3900F
	R6847		RS1/16S3901F
	R6860		RS1/16S473J
	Other Resistors		RS1/16SS###J
OTHERS			
	JA6801	HDMI CONNECTOR	AKP1232
CAPACITORS			
	C6853		CCSRCH470J50
[ROZ BLOCK]			
SEMICONDUCTORS			
	IC6951		PD6435A
	Q6951		RN1303
CAPACITORS			
	C6959,C6960		CCSRCH150J50
	C6951		CEHVKW101M6R3
	C6952-C6954,C6956-C6958		CKSSYF104Z16
	C6961,C6962,C6964-C6968		CKSSYF104Z16
RESISTORS			
	R6951-R6953,R6956-R6962,R6966		RAB4CQ100J
	R6968,R6972		RAB4CQ100J
	R6945,R6946,R6988		RAB4CQ103J
	Other Resistors		RS1/16SS###J
OTHERS			
	X6951	CERAMIC RESONATOR	ASS1169
RESISTORS			
	R6982-R6986,R6992		RAB4CQ101J
	Other Resistors		RS1/16SS###J
OTHERS			
	CN6951	50P CONNECTER	AKM1201
[CELIA BLOCK]			
SEMICONDUCTORS			
	IC7001,IC7002		HY57V643220CT-7
	IC7004		PE5362A
	IC7003		TC74LCX125FT
COILS AND FILTERS			
	F7001,F7002	EMI FILTER	CCG1162
CAPACITORS			
	C7031 (10/6.3)		ACG7046
	C7029,C7041 (330uF/6.3V)		ACH1365
	C7064		CCSRCH100D50
	C7025,C7066,C7067		CCSRCH221J50
	C7001-C7024,C7026-C7028		CKSSYF104Z16
	C7032-C7040,C7042-C7063		CKSSYF104Z16

Mark No.	Description	Part No.
	RESISTORS	
	R7013-R7018,R7030	RAB4CQ220J
A	R7007	RS1/16S220J
	Other Resistors	RS1/16SS###J
	OTHERS	
	X7001 CRYSTAL OSCILLATOR (85MHz)	ASS1174
	[MIKE BLOCK]	
	SEMICONDUCTORS	
	IC7152	MBM29PL3200BE70PFV
	IC7101	PD5855A
B	**COILS AND FILTERS**	
	F7101,F7102 EMI FILTER	CCG1162
	CAPACITORS	
	C7103,C7120 (330uF/6.3V)ACH1365	
	C7101,C7102,C7104-C7119	CKSSYF104Z16
	C7121-C7135,C7152,C7158-C7162	CKSSYF104Z16
	RESISTORS	
	R7113,R7115,R7116,R7119,R7121	RAB4CQ101J
	R7123,R7124	RAB4CQ101J
	R7102,R7105-R7108,R7110,R7111	RAB4CQ330J
C	Other Resistors	RS1/16SS###J
	[MAIN UCOM BLOCK]	
	SEMICONDUCTORS	
	IC7205	BR24L64F-W
	IC7207	MB91F355APMTGE1
	IC7201	MM1522XU
	IC7209	NJM12904V
	IC7211	PQ20WZ11
	IC7210	PST3612UR
D	IC7203,IC7206	PST3628UR
	IC7202	TC74VHC125FT
	Q7203	2SA1586
	Q7201	2SJ461A
	Q7202	HN1C01FU
	Q7206,Q7207	RN1902
	D7201,D7202	1SS355
	D7203	SML-311UT
	D7204	UDZS2R7(B)
	CAPACITORS	
	C7244	CCSRCH100D50
E	C7231	CCSRCH102J50
	C7243,C7245	CCSRCH221J50
	C7241,C7242,C7248,C7249	CCSRCH470J50
	C7213,C7218	CCSRCH7R0D50
	C7205	CEHVKW101M6R3
	C7201,C7217,C7236,C7239,C7252	CKSRYB103K50
	C7226,C7237	CKSRYB104K16
	C7216	CKSRYB472K50
	C7209-C7212,C7214,C7215,C7219	CKSSYF104Z16
	C7221-C7225,C7227-C7229	CKSSYF104Z16
	C7232-C7234,C7238,C7240	CKSSYF104Z16
F	C7246,C7247,C7253 (10uF/16V)	DCH1165
	RESISTORS	
	R7221,R7229,R7241,R7248-R7250	RAB4CQ101J

Mark No.	Description	Part No.
	R7201	RAB4CQ472J
	R7244,R7245,R7275,R7286,R7287	RS1/16S0R0J
	R7290,R7295-R7306	RS1/16S0R0J
	R7269	RS1/16S101J
	R7278	RS1/16S2201F
	R7215	RS1/16S223J
	R7279	RS1/16S4700F
	R7227,R7260	RS1/16S473J
	R7224	RS1/16S682J
	R7280	RS1/16S7500F
	R7277	RS1/16S8201F
	Other Resistors	RS1/16SS###J
	OTHERS	
	CN7203 3P CONNECTOR	AKM1213
	CN7201 PLUG 8-P	AKM1225
	CN7202 3P PH CONNECTOR	AKM1274
	X7201 CERAMIC RESONATOR	ASS1170
	SEMICONDUCTORS	
	IC7204	TC74VHC125FT
	CAPACITORS	
	C7202,C7203,C7258,C7259	CCSRCH470J50
	C7220	CKSSYF104Z16
	RESISTORS	
	All Resistors	RS1/16SS###J
	OTHERS	
	CN7204 3P PH CONNECTOR	AKM1274
	[MR IF BLOCK] [REGLATORBLOCK]	
	SEMICONDUCTORS	
	IC7453	BA33BC0WFP
	IC7454	BA50BC0WFP
	IC7456	NCP1117DT15
	IC7401	SII170BCLG64
	IC7404	TC74VCX08FT
	IC7403	TC74VCX574FT
	IC7451	TC74VHC08FT
	Q7406	2SA1586
	Q7405	HN1C01FU
	Q7403,Q7407,Q7408	RN1303
	Q7451	RN1901
	Q7401	RN1902
	Q7402,Q7404,Q7409	RN2303
	D7401-D7407,D7457-D7459	1SS355
	COILS AND FILTERS	
	F7405-F7408 EMI FILTER	ATF1209
	L7401 (3.3uH)	ATH1162
	F7401-F7404 EMI FILTER	CCG1162
	CAPACITORS	
	C7416,C7421,C7424,C7484 (10/6.3)	ACG7046
	C7474 (330uF/6.3V)	ACH1365
	C7401,C7402	CCSRCH100D50
	C7475,C7477-C7482	CCSRCH221J50
	C7403,C7404,C7406,C7407	CCSRCH820J50
	C7410,C7411,C7413,C7414,C7419	CCSRCH820J50
	C7456,C7460,C7465	CEHVKW101M6R3
	C7405,C7412,C7415,C7417,C7418	CKSSYF104Z16

Mark No.	Description	Part No.
	C7420,C7423,C7451,C7452	CKSSYF104Z16
	C7454,C7455,C7458,C7459,C7466	CKSSYF104Z16
	C7469,C7473,C7476	CKSSYF104Z16
	C7453,C7457 (10uF/16V)	DCH1165
	RESISTORS	
	R7425,R7449,R7451,R7452,R7454	RAB4CQ101J
	R7481,R7497-R7499	RAB4CQ101J
	R7453	RAB4CQ103J
	R7440,R7441,R7443	RS1/16S0R0J
	R7417,R7418,R7429,R7431	RS1/16S111J
	R7428,R7430	RS1/16S272J
	R7410	RS1/16S5100F
	R7456	RS1LMF1R5J
	R7455	RS2LMF4R7J
	Other Resistors	RS1/16SS###J
	OTHERS	
	CN7454,CN7455 50P CONNECTER	AKM1201
	CN7453 PLUG 15-P	AKM1232
	CN7402 16P FFC CONNECTOR	AKM1234
	CN7451 PH 15P CONNECTOR	AKM1301
	CN7401 DVI SOCKET (24P)	AKP1250
	SEMICONDUCTORS	
	IC7452	TC74VHC126FT
	CAPACITORS	
	C7137,C7485,C7486	CCSRCH470J50
	C7068,C7471	CKSSYF104Z16
	RESISTORS	
	R7477	RAB4CQ101J
	R7382	RS1/16S102J
	Other Resistors	RS1/16SS###J

B AV BOARD ASSY

[TUNER BLOCK]

	SEMICONDUCTORS	
	IC7503	CXA2064M
	IC7502	TC74HC4066AFT
	Q7503,Q7512,Q7520,Q7521	2SA1586
	Q7501,Q7502,Q7504,Q7506	2SC4116
	Q7508-Q7511,Q7519	2SC4116
	Q7515	DTA124EUA
	Q7505,Q7513,Q7516,Q7517	HN1B04FU
	D7502	1SS355
	D7501	UDZS30(B)
	COILS AND FILTERS	
	F7501-F7504	VTF1080
	CAPACITORS	
	C7527,C7529,C7533,C7535,C7536	ACG1122
	C7550 (4.7uF/10V)	ACG1122
	C7518,C7553 (10/6.3)	ACG7046
	C7548 (100uF/16V)	ACH1394
	C7530	ACH1417
	C7528	ACH1418
	C7501	CEHVKW100M50
	C7508,C7509,C7544,C7545	CEHVKW101M6R3
	C7502,C7520,C7524	CKSRYB102K50
	C7516	CKSRYB103K50

Mark No.	Description	Part No.
	C7531,C7537	CKSRYB105K10
	C7552	CKSRYB123K50
	C7532	CKSRYB272K50
	C7523,C7554	CKSRYB332K50
	C7526	CKSRYB473K16
	C7538	CKSRYB562K50
	C7510,C7519,C7539,C7549	CKSRYF104Z50
	C7534,C7551,C7557,C7558 (10uF/16V)	DCH1165
	RESISTORS	
	R7502	ACN1199
	R7545,R7546	RS1/16S1002F
	R7559	RS1/16S6802F
	VR7505 (470)	CCP1388
	VR7503 (4.7K)	CCP1394
	VR7502,VR7504,VR7506 (10k)	CCP1396
	Other Resistors	RS1/16S###J
	OTHERS	
	U7501 TV FRONTEND SYSTEM UNIT	AXF1130
	U7502 TV FRONTEND	AXF1132

[AV IO BLOCK]

	SEMICONDUCTORS	
	IC7801	SP3232ECY
	IC7803	TC74VHC00FT
	IC7802	TC74VHC125FT
	Q7705,Q7706,Q7716,Q7801,Q7804	2SA1586
	Q7807	2SA1586
	Q7708,Q7709,Q7711,Q7713-Q7715	2SC4116
	Q7805	2SC4116
	Q7702,Q7703	2SC5233
	Q7701,Q7718	DTA124EUA
	Q7704,Q7802,Q7803,Q7806,Q7808	DTC124EUA
	Q7707,Q7710,Q7712	HN1A01FU
	D7701	1SS301
	D7702-D7707,D7710-D7712	1SS302
	D7708,D7807-D7810	1SS355
	D7713-D7718	UDZS9R1(B)
	CAPACITORS	
	C7718,C7725,C7747	ACH1419
	C7806,C7809	CEHVKW100M16
	C7702,C7707,C7711,C7739,C7741	CKSRYB103K50
	C7744-C7746	CKSRYB103K50
	C7701,C7703-C7705,C7709	CKSRYB105K10
	C7715-C7717,C7723,C7724,C7730	CKSRYB105K10
	C7732,C7740,C7752-C7754	CKSRYB105K10
	C7706,C7743	CKSRYB473K16
	C7713,C7721,C7726,C7801-C7805	CKSRYF104Z50
	C7807,C7808	CKSRYF104Z50
	C7708,C7710,C7712,C7714	DCH1165
	C7719,C7720,C7727,C7731,C7733	DCH1165
	C7737,C7738,C7742,C7749-C7751 (10uF/16V)	DCH1165
	RESISTORS	
	R7711,R7719,R7735,R7736	RS1/10S151J
	R7744,R7745	RS1/10S151J
	R7813	RS1/10S680J
	R7703,R7704,R7727,R7757,R7758	RS1/16S75R0F
	R7761-R7763,R7766,R7769-R7771	RS1/16S75R0F

Mark No.	Description	Part No.
	Other Resistors	RS1/16S###J
	OTHERS	
	JA7704 6P PIN JACK	AKB1295
	JA7701 6P PIN JACK	AKB1297
	JA7702 4P PIN JACK	AKB1313
	JA7703 PINJACK+MINI DIN 4P	AKB1314
	CN7801 12P FFC CONNECTOR	AKM1233
	JA7705 2P 4PIN MINIDIN(S)	AKP1234
	JA7801 9P D-SUB SOCKET	AKP1240
	[AV SW BLOCK]	
	SEMICONDUCTORS	
	IC8005	AN15852A
	IC8002	CXA2069Q
	IC8004	NJM12904V
	IC8003	TC4052BFT
	IC8001	TC7WH123FU
	Q8005,Q8006,Q8013,Q8014	2SA1586
	Q8001,Q8002,Q8007-Q8010,Q8012	2SC4116
	Q8016,Q8019,Q8020	2SC4116
	Q8015	2SK209
	Q8003,Q8018	DTA124EUA
	Q8004,Q8017	DTC124EUA
	Q8011	HN1C01FU
	D8002	1SS301
	D8001,D8015,D8016	1SS355
	CAPACITORS	
	C8051 (10/6.3)	ACG7046
	C8012,C8056 (100uF/16V)	ACH1394
	C8022,C8027	CCSRCH181J50
	C8019,C8038	CCSRCH681J50
	C8040,C8041	CEHVKW100M16
	C8002-C8004,C8008,C8009,C8016	CKSRYB105K10
	C8050	CKSRYB105K10
	C8001,C8005-C8007,C8010,C8013	CKSRYF104Z50
	C8015,C8025,C8026,C8031-C8036	CKSRYF104Z50
	C8039,C8042-C8044,C8048,C8049	CKSRYF104Z50
	C8052,C8053,C8055,C8059	CKSRYF104Z50
	C8011,C8014,C8017,C8018	DCH1165
	C8023,C8024,C8028,C8037	DCH1165
	C8045,C8046,C8061 (10uF/16V)	DCH1165
	RESISTORS	
	All Resistors	RS1/16S###J
	[AV REG BLOCK]	
	SEMICONDUCTORS	
	IC8505	BA50BC0WFP
	IC8504	BA90BC0WFP
	IC8506	BD6522F
	IC8503	M5291FP
	IC8502	NCP1117ST33
	Q8501,Q8502,Q8504	2SC4116
	Q8503	DTA124EUA
	Q8511	TPC6104
	D8503,D8505,D8508,D8512	1SS355
	D8509	D1FL20U(S)
	D8502	UDZS30(B)
	D8501	UDZS5R6(B)
	COILS AND FILTERS	
	L8502 INDUCTOR	ATH1182
	F8502-F8506 EMI FILTER	CCG1162
	CAPACITORS	
	C8508,C8521,C8523,C8529,C8531	ACG7046
	C8533 (10/6.3)	ACG7046
	C8505,C8512 (100uF/16V)	ACH1394
	C8520 (47uF/50V)	ACH1403
	C8519	CCSRCH221J50
	C8514	CCSRCH821J50
	C8500,C8540,C8542	CEHAZL471M16
	C8503,C8526,C8554	CEHVKW100M16
	C8501	CEHVKW100M35
	C8507,C8527	CEHVKW100M50
	C8517	CEHVKW101M6R3
	C8506,C8510,C8515,C8522,C8552	CEHVKW220M16
	C8502,C8504,C8511,C8513,C8516	CKSRYB103K50
	C8518,C8524,C8525,C8551,C8553	CKSRYB103K50
	C8509,C8541,C8543 (10uF/16V)	DCH1165
	RESISTORS	
	R8511	ACN1164
	R8506,R8507,R8513,R8514	ACN1188
	R8543,R8544,R8547,R8548	ACN1188
	R8502,R8531	ACN1199
	R8503	RD1/2LMF100J
	R8501	RD1/2LMF391J
	R8512	RS1/16S1101F
	R8523	RS1/16S3302F
	R8508	RS1LMF8R2J
	R8536	RS1LMFR56J
	R8524	RS2LMF3R3J
	Other Resistors	RS1/16S###J
	OTHERS	
	CN8504 PLUG(15P)	KM200NA15
	U8502, U8503 DD CON UNIT	AXY1088
	U8504 DD CON UNIT	AXY1089
	[BOARD IF BLOCK]	
	CAPACITORS	
	C8651,C8652	CCSRCH181J50
	RESISTORS	
	All Resistors	RS1/16S###J
	OTHERS	
	CN8651-CN8653 50P CONNECTER	AKM1201
	CN8657 40P CONNECTER	AKM1303
	[UIF UCOM BLOCK]	
	SEMICONDUCTORS	
	IC8705	BR24L01AFJ-W
	IC8702	HD64F3687FP
	IC8703	PST9231N
	IC8701	TC74VHC08FT
	IC8704	TC7W126FU
	Q8702	DTC124EUA
	CAPACITORS	

Mark No.	Description	Part No.
C8706,C8707		CCSRCH120J50
C8714,C8715		CCSRCH470J50
C8716		CEHVKW101M6R3
C8709		CKSRYB472K50
C8701-C8705,C8708,C8711-C8713		CKSRYF104Z50

RESISTORS

R8719		RAB4C101J
R8702,R8704,R8720,R8745		RAB4C103J
Other Resistors		RS1/16S###J

OTHERS

CN8701	PLUG 8-P	AKM1225
CN8702	3P PH CONNECTOR	AKM1274
X8702	CERAMIC RESONATOR	ASS1168
X8701	CERAMIC RESONATOR (32.768kHz)	ASS1172

[CCD BLOCK]

SEMICONDUCTORS

IC8904		FMS6410CS
IC8903		PD5910A
IC8906		PST3628UR
Q8902-Q8904,Q8923,Q8924		2SA1586

CAPACITORS

C8913,C8916 (2.2uF/16V)		ACG1109
C8912,C8915		CCSRCH221J50
C8920,C8921		CCSRCH5R0C50
C8904,C8907		CCSRCH681J50
C8944		CCSRCK2R0C50
C8910,C8919		CEHVKW100M16
C8911,C8914,C8931		CKSRYB102K50
C8930		CKSRYB103K50
C8935,C8936		CKSRYB105K10
C8945		CKSRYB153K50
C8929		CKSRYB683K16
C8901,C8903,C8906,C8909		CKSRYF104Z50
C8917,C8918,C8925,C8937		CKSRYF104Z50

RESISTORS

R8932		RAB4C101J
R8907-R8916,R8918,R8923,R8930		RAB4C473J
R8948,R8949,R8951		RAB4C473J
Other Resistors		RS1/16S###J

OTHERS

X8901	CERAMIC RESONATOR (16MHz)	ASS1159

E MDR ASSY

SEMICONDUCTORS

IC9301,IC9302		TC74VHC08FT
Q9301,Q9302		2SC4116
Q9303		DTA124EUA

CAPACITORS

C9304		CCSRCH101J50
C9301,C9305-C9308		CCSRCH471J50
C9302,C9303		CKSRYF104Z50

RESISTORS

All Resistors		RS1/16S###J

OTHERS

Mark No.	Description	Part No.
CN9301	SOCKET (20P)	AKP1226
CN9302	CONNECTOR	CKS3830

F SR ASSY

OTHERS

JA9453	MINI JACK(4P)	AKN1073
CN9452	CONNECTOR	CKS3826
JA9451,JA9452	JACK	RKN1004
9453	SCREW TERMINAL	VNE1949

G FRONT ASSY

SEMICONDUCTORS

IC9501		BR24C21FJ
IC9502		TC74VHC08FT
Q9503-Q9508		2SC4116
Q9501,Q9502		DTC124EUA
D9503		1SS301
D9506-D9508,D9514-D9516		1SS302
D9501,D9502,D9504,D9505		UDZS5R6(B)
D9509-D9511,D9517,D9518		UDZS9R1(B)

CAPACITORS

C9517,C9518		CCSRCH220J50
C9520-C9522,C9526-C9528		CEHVKW470M6R3
C9505,C9506,C9531-C9533		CKSRYB103K50
C9504,C9514		CKSRYB104K16
C9507-C9512		CKSRYB105K10
C9503		CKSRYB473K16
C9516,C9519,C9537,C9629		CKSRYF104Z16
C9513,C9515,C9523,C9534-C9536		DCH1165
C9538-C9540		DCH1165

RESISTORS

R9504,R9507,R9508,R9534-R9536		RS1/16S75R0F
R9543-R9545		RS1/16S75R0F
Other Resistors		RS1/16S###J

OTHERS

JA9501	PIN JACK(3P)	AKB1303
JA9504	PIN JACK(3P)	AKB1305
CN9502	50P CONNECTER	AKM1201
JA9502	4P MINIDIN SOCKET(S)	AKP1238
JA9505	15P D-SUB SOCKET	AKP1241
JA9503	JACK	RKN1026

H LED ASSY

SEMICONDUCTORS

Q9651		DTA124EUA
Q9653		HN1C01FU
Q9652		RN2902
D9652		SML-310DT
D9654		SML-310MT
D9653		SML-311UT
D9655		SML-521MDW

CAPACITORS

C9651		CKSRYB103K50

RESISTORS

All Resistors		RS1/16S###J

Mark	No.	Description	Part No.
		OTHERS	
	CN9651	7P PH CONNECTOR	AKM1293

I TUNER BOARD ASSY

Mark	No.	Description	Part No.
		OTHERS	
	1	SCREW	ABZ30P060FTC
	10	WIND REFLECTOR 2	AEC2011
⚠	90	GASKET C	AEC2014
	2	WIND REFLECTOR	AEC7521
⚠	5	GASKET A	AEC7528
⚠	6	GASKET B	AEC7529
	1	CASE TOP	ANG2659
⚠	4	PCMCIA EJECTOR	ANG2673
⚠	8	GROUND PLATE A	ANG2698
⚠	9	GROUND PLATE B	ANG2699
	7	TOP COVER	ANG2706
	3, 5	SCREW	BBZ30P080FTC
	1	RIVET A	BEC1158
	4	SCREW	PMZ20P080FTC
	6	SCREW	VMZ30P060FTC
		[I/O POWER BLOCK]	
		SEMICONDUCTORS	
	IC1012		24LC256T(I)SNG
	IC1015		BA00BC0WFP
	IC1021		CY2305SC-1H
	IC1022		KA5SDKAS01TSN
	IC1007,IC1016		MM1562FF
	IC1006		MM1563DF
	IC1004,IC1005,IC1023		MM1565AF
	IC1008,IC1009		NJM2370U09
	IC1010		PST3622NR
	IC1013,IC1014		R1224N102H
	IC1019		S-L2980A15MC-C6A
	IC1011		TC7S08FU
	Q1006,Q1012		2SA1576A
	Q1008,Q1009		CPH5802
	Q1005		DTC124EUA
	Q1001,Q1010,Q1011,Q1013		RN1901
	Q1003		UMD2N
	D1001		1SS355
	D1003-D1009,D1014,D1019		RB501V-40
		COILS AND FILTERS	
	L1003,L1004		ATH1161
	L1008,L1010	CHIP BEEDS FILTER	BTX1039
	L1005-L1007,L1009,L1011-L1018	CHIP BEEDS FILTER	BTX1042
	F1001,F1002	FERRITE CORE	VTF1084
		CAPACITORS	
	C1049,C1051,C1090		BCG1054
	C1078		BCG1059
	C1048		CCSRCH102J50
	C1019-C1022,C1057,C1089		CCSRCH471J50
	C1008		CEHVKW100M50
	C1001,C1010,C1054-C1056,C1060		CEHVKW101M6R3
	C1064		CEHVKW101M6R3
	C1009,C1014,C1015,C1034,C1035		CEHVKW470M16
	C1053,C1070		CEHVKW470M16
	C1032,C1039-C1041,C1061,C1076		CKSQYB225K10
	C1088		CKSQYB225K10
	C1036		CKSRYB103K50
	C1027-C1029,C1031,C1042,C1045		CKSRYF105Z10
	C1059,C1075,C1087		CKSRYF105Z10
	C1002,C1012,C1013,C1016,C1017		CKSSYB103K16
	C1026,C1030,C1037,C1038		CKSSYB103K16
	C1043,C1044,C1050,C1058,C1062		CKSSYB103K16
	C1065,C1069,C1074,C1085,C1086		CKSSYB103K16
	C1018,C1023-C1025,C1046,C1047		CKSSYF104Z16
	C1052,C1084,C1091		CKSSYF104Z16
		RESISTORS	
	R1073,R1074		RS1/10S271J
	R1035		RS1/16SS1103F
	R1039		RS1/16SS1202F
	R1043		RS1/16SS1503F
	R1019		RS1/16SS2202F
	R1032		RS1/16SS5102F
	R1021		RS1/16SS5602F
	R1041		RS1/16SS9102F
	R1069,R1070		RS1/16S470J
	R1080,R1081,R1109		RS1/4S1R5J
	R1015,R1042		RS1/4S3R3J
	Other Resistors		RS1/16SS###J
		OTHERS	
	CN1001	40P CONNECTER	AKM1217
	CN1002	12P PH CONNECTOR	AKM1298
	CN1003	14P PH CONNECTOR	AKM1300
	X1001	CRYSTAL RESONATOR (27.0000MHz)	BSS1123
		[FRONT END BLOCK]	
		SEMICONDUCTORS	
	IC1502		BA10358F
	IC2002		BCM3510KPFG
	IC1501		TC7W66FU
	IC1503		UPC1663GV
	IC4503		UPC3220GR
	Q1503-Q1505		2SC5084
	Q1501		RN1901
	D1501,D1502		1SS312
		COILS AND FILTERS	
	F4502	SAW FILTER	ATF1215
	F1501,F1502	SAW FILTER	BTF1079
	L1504,L1505	CHIP COIL	BTH1121
	L4564		LCTAW1R5J2520
	L4565		LCYA10NJ2520
	L4503		LCYA56NJ2520
	L4502,L4505		LCYA68NJ2520
	L4501,L4509		LCYA82NJ2520
	L4507		LCYAR10J2520
	L1501		LCYAR68J2520
	F1504-F1507,F1510,F1511,F1514		VTF1084
	F2001-F2004,F4504	FERRITE CORE	VTF1084
		CAPACITORS	
	C1505,C1521		ACH1421
	C1501,C1509,C2001,C2002,C2015		BCG1054
	C2018,C2019,C2038,C2039		BCG1054
	C4505		CCSRCH271J50

Mark No.	Description	Part No.
	C4504	CCSSCH100D50
	C4501,C4513,C4534	CCSSCH101J50
	C4511	CCSSCH120J50
	C2033,C2040	CCSSCH220J50
	C4502,C4503,C4509	CCSSCH270J50
	C4515,C4517	CCSSCH390J50
	C4507	CCSSCH560J50
	C1516,C1531,C1536	CEHVKW100M16
	C1508	CEHVKW100M50
	C1510	CEHVKW101M25
	C1507	CKSRYB103K50
	C1503,C4518,C4524,C4528	CKSSYB102K50
	C4532,C4533,C4535	CKSSYB102K50
	C1502,C1504,C1506,C1511,C1512	CKSSYB103K16
	C1514,C1517,C1519,C1522-C1526	CKSSYB103K16
	C1528-C1530,C1534,C1537-C1548	CKSSYB103K16
	C1552,C2003-C2014,C2016,C2017	CKSSYB103K16
	C2020-C2032,C2035-C2037,C4520	CKSSYB103K16
	C4525,C4530,C4544,C4546,C4547	CKSSYB103K16
	C4551-C4553	CKSSYB103K16
	C1515,C1518,C1533	CKSSYB104K10
	C1513,C1535	CKSSYF104Z16
RESISTORS		
	R1548	RS1/16SS1001F
	R1557	RS1/16SS2201F
	R2036	RS1/16S0R0J
	Other Resistors	RS1/16SS###J
OTHERS		
	X2001 CRYSTAL RESONATOR (26.800MHz)	ASS1186
⚠	M1501 TUNER MODULE	AXF1125
[POD BLOCK]		
SEMICONDUCTORS		
	IC2501	109865-PBF
	IC2502	TC74LCX244FT
	IC2504	TC74LCX245FT
	IC2503	TC74LCX257FT
	IC2505,IC2506	TC74LCX373FT
CAPACITORS		
	C2510	CCSSCH680J50
	C2502-C2509	CKSSYF104Z16
RESISTORS		
	R2259,R2503,R2507,R2511-R2513	BCN1067
	R2510,R2521,R2559	RAB4C103J
	R2535,R2546,R2552,R2553	RAB4C470J
	Other Resistors	RS1/16SS###J
OTHERS		
	CN2501 PCMCIA CONNECTOR	AKP1259
[SYSTEM IC BLOCK]		
SEMICONDUCTORS		
	IC5501	BCM7021RKPB1G-D0
	IC3001	BCM7115A3KPBG
	IC5502	CY22381FSZC-147
	IC5201	PE5434A
	IC3003,IC3004	TC7SA08FU

Mark No.	Description	Part No.
	D5201	RB501V-40
COILS AND FILTERS		
	F3014 CHIP FERRITE BEADS	ATF1212
	F3003,F3004,F3006-F3008	VTF1084
	F3010-F3013,F3015,F5501-F5504	VTF1084
	F5506,F5507 FERRITE CORE	VTF1084
CAPACITORS		
	C3035,C3036,C5532	BCG1054
	C5502 CERAMIC CAPACITOR	BCG1059
	C3105	CCSSCH220J50
	C3095,C3096	CCSSCH5R0C50
	C3103	CEHVKW100M16
	C5514	CEHVKW101M6R3
	C3016	CKSRYF105Z10
	C3085,C3093	CKSSYB102K50
	C3024,C3025,C3027,C3029	CKSSYB103K16
	C3033,C3034,C3038,C3053,C3058	CKSSYB103K16
	C3065,C3066,C3089,C3091	CKSSYB103K16
	C5201-C5212,C5501,C5503-C5513	CKSSYB103K16
	C5515-C5531,C5533-C5535	CKSSYB103K16
	C3001,C3002,C3004-C3010	CKSSYB104K10
	C3012-C3015,C3017,C3018	CKSSYB104K10
	C3020-C3023,C3026,C3028	CKSSYB104K10
	C3031,C3032,C3040,C3041	CKSSYB104K10
	C3043-C3045,C3047-C3049	CKSSYB104K10
	C3051,C3052,C3054-C3057,C3059	CKSSYB104K10
	C3061,C3064,C3067-C3070,C3072	CKSSYB104K10
	C3074-C3076,C3078,C3080,C3081	CKSSYB104K10
	C3084,C3086-C3088,C3090,C3092	CKSSYB104K10
	C3100,C3101,C3106	CKSSYB104K10
RESISTORS		
	R3062-R3066	BCN1067
	R5003,R5007,R5501,R5526	BCN1072
	R3079	RAB4C102J
	R3048	RAB4C103J
	R3021,R5545,R5547,R5548	RAB4C330J
	R5507,R5522,R5524	RAB4C472J
	R5528,R5529,R5532	RAB4C560J
	R3036,R3037	RS1/16S1002F
	R5513	RS1/16S1371F
	R3117,R3118,R3121,R5017	RS1/16S220J
	R5585	RS1/16S3240F
	R3005,R3028	RS1/16S4021F
	Other Resistors	RS1/16SS###J
OTHERS		
	X3001 CRYSTAL RESONATOR (25.000MHz)	ASS1185
[MEMORY BLOCK]		
SEMICONDUCTORS		
	IC6001-IC6004	IC42S16800-6TG
	IC3501,IC3505	K4H561638F-UCB3
	IC3503	PC28F128K3C115
COILS AND FILTERS		
	F6001-F6004 CHIP FERRITE BEADS	ATF1212
	F6005-F6008 FERRITE CORE	VTF1084
CAPACITORS		

Mark No.	Description	Part No.
	C3509	CEHVKW101M6R3
	C3502-C3508,C3510-C3515	CKSSYB103K16
	C3518,C3519,C3521-C3523	CKSSYB103K16
A	C3526,C3527,C3529,C6001-C6028	CKSSYB103K16
	C3516,C3517,C3524,C3525	CKSSYB104K10
	RESISTORS	
	R3531	RAB4C103J
	R6001,R6006	RAB4C330J
	R3521,R3540	RS1/16S1210F
	Other Resistors	RS1/16SS###J
	OTHERS	
	CN3501 80P CONNECTOR RCPT	BKP1159
B	**[AUDIO/VIDEO BLOCK]**	
	SEMICONDUCTORS	
	IC4007	AK5381VT
	IC4005	CY24216SC-1
	IC4001,IC4003,IC4006	NJM2068V
	IC8501	TC90A92AFG
	Q4001-Q4003,Q8502	2SA1576A
	Q8501	2SC4081
	COILS AND FILTERS	
	L4004,L4005 CHIP COIL	BTH1107
C	L8508	LCTAW1R5J2520
	F4004-F4007,F8501,F8504-F8507	VTF1084
	F8509-F8511 FERRITE CORE	VTF1084
	CAPACITORS	
	C4003,C4018,C4078,C8503,C8519	BCG1054
	C8521-C8523,C8542,C8544	BCG1054
	C4019,C4079,C4085	BCG1059
	C8506	CCSRCH151J50
	C4001,C4002	CCSRCH391J50
	C4038,C4039	CCSRCH471J50
	C4036,C4037,C4070,C8550	CCSSCH101J50
D	C8532	CCSSCH180J50
	C8528	CCSSCH220J50
	C4009,C4010	CCSSCH221J50
	C4004,C4005,C4007,C4008	CCSSCH390J50
	C8502	CCSSCH4R0C50
	C4011,C4012	CEHVKW470M16
	C4021,C4024	CKSQYB225K10
	C8524	CKSRYB152K50
	C8501	CKSRYB474K10
	C4015,C8531	CKSSYB102K50
	C4006,C4013,C4014,C4027,C4028	CKSSYB103K16
E	C4040,C4059,C4083,C4084	CKSSYB103K16
	C8507-C8511,C8513-C8516,C8518	CKSSYB103K16
	C8527,C8529,C8530,C8533-C8540	CKSSYB103K16
	C8549,C8554	CKSSYB103K16
	C4025,C4029,C4073,C4080,C4081	CKSSYB104K10
	C8512,C8517,C8520,C8545-C8548	CKSSYB104K10
	C4067,C4068	CKSSYB821K50
	C4047,C4053,C4054,C4057,C4061	CKSSYF104Z16
	C4082	CKSSYF104Z16
F	**RESISTORS**	
	R8511	BCN1070
	R4025,R4026	RS1/16SS1002F
	R4013,R4014,R4048,R4049	RS1/16SS2402F

Mark No.	Description	Part No.
	R4052,R4053	RS1/16SS2402F
	R8509	RS1/16S220J
	Other Resistors	RS1/16SS###J
	OTHERS	
	X8501 CRYSTAL RESONATOR (42MHz)	ASS1184
	JA4001 OPTICAL OUT MOD.	GP1FM513TZ
	[DIGITAL VIDEO BLOCK]	
	SEMICONDUCTORS	
	IC7501	PE5436A
	IC7503-IC7505	TC74LCX541FT
	COILS AND FILTERS	
	F7501-F7504 FERRITE CORE	VTF1084
	CAPACITORS	
	C7507	BCG1054
	C7501-C7506,C7508,C7510,C7511	CKSSYB104K10
	RESISTORS	
	R7540,R7541	BCN1067
	R7518	RAB4C0R0J
	R7547-R7550	RS1/16S470J
	Other Resistors	RS1/16SS###J
	OTHERS	
	CN7501 50P CONNECTER	AKM1236
	[IEEE1394 BLOCK]	
	SEMICONDUCTORS	
	IC8004	PST3622NR
	IC8003	TC74LCX125FT
	IC8005	TC7S08FU
	IC8006	TC7SA08FU
	IC8001	TSB43CA42ZGW
	Q8001	DTC124EUA
	COILS AND FILTERS	
	L8001-L8004 CHOKE COIL	ATH1160
	F8001,F8002 EMI FILTER	DTL1106
	F8003 FERRITE CORE	VTF1084
	CAPACITORS	
	C8012,C8013	CCSSCH100D50
	C8026,C8027	CCSSCH221J50
	C8024,C8025	CKSRYB105K6R3
	C8014,C8019	CKSRYF104Z16
	C8029-C8031	CKSSYB102K50
	C8033,C8034	CKSSYB103K16
	C8037	CKSSYB104K10
	C8001-C8011,C8015-C8018	CKSSYF104Z16
	C8020-C8023,C8032,C8036	CKSSYF104Z16
	RESISTORS	
	R8001,R8002,R8013	BCN1070
	R8033,R8036,R8050,R8064	BCN1072
	R8004	RAB4C0R0J
	R8030	RAB4C472J
	R8077,R8079	RS1/16SS5101F
	R8065-R8068,R8073,R8074,R8076	RS1/16SS56R0D
	R8078	RS1/16SS56R0D

Mark No.	Description	Part No.
R8051		RS1/16SS6341D
Other Resistors		RS1/16SS###J

OTHERS

CN8001,CN8002	1394 TERMINAL	AKP1268
X8001	CRYSTAL RESONATOR (24.576MHz)	VSS1192

J SW ASSY

SWITCHES AND RELAYS

S8701	POWER SWITCH	ASG1097

OTHERS

CN8703	3P PH CONNECTOR	AKM1289

K POWER SUPPLY UNIT

POWER SUPPLY UNIT has no service part.

6. ADJUSTMENT

1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced. If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.
2. Any value changed in Service/Factory mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for reference in case you need to restore the original settings.
3. Use a stable AC power supply.

6.1 HOW TO ENTER SERVICE FACTORY MODE

■ Refer to the technical document (Service Know-How).

6.2 POSSIBLE CASES WHERE READJUSTMENT IS REQUIRED

■ When any of the following assemblies is replaced

POWER SUPPLY Unit	➡	No adjustment required
AV BOARD Assy	➡	No adjustment required
MR MAIN BOARD Assy	➡	No adjustment required
TUNER Board Assy	➡	No adjustment required However, HOST ID is changed. Please tell a customer about new HOST ID. Refer to the following note and instruction manual.
Other assemblies	➡	No adjustment required

■ When any part in the following assemblies is replaced

POWER SUPPLY Unit	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
AV BOARD Assy	➡	If the front end (U7501, U7502) is replaced, adjustment is required.
MR MAIN BOARD Assy	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
TUNER Board Assy	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
Other assemblies	➡	No adjustment required

■ Adjustment items

① Audio Level Adjustment
② Video Level Adjustment
③ Audio Level Adjustment
④ MSP Adjustment
⑤ MSP Adjustment

NOTE : Checking the Cable Card ID

The Media Receiver has a slot for a cable card that is used for managing your information by the cable TV company. The following procedure allows you to check your Cable Card ID and the Host ID.

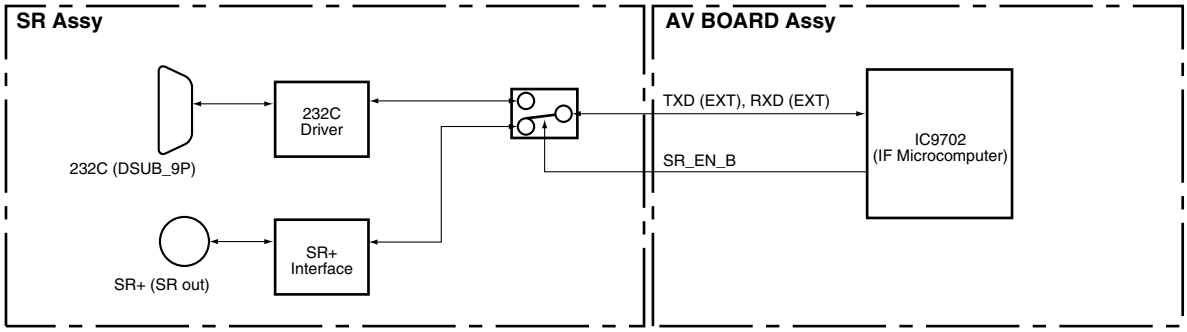
1 Press HOME MENU.
2 Select “Tuner Setup”. (↑/↓ then ENTER)
3 Select “Channel Setup”. (←/→ then ENTER)
4 Select “POD ID”. (↑/↓)
- The Host ID and Cable Card ID appear.

5 Press HOME MENU to exit the menu.

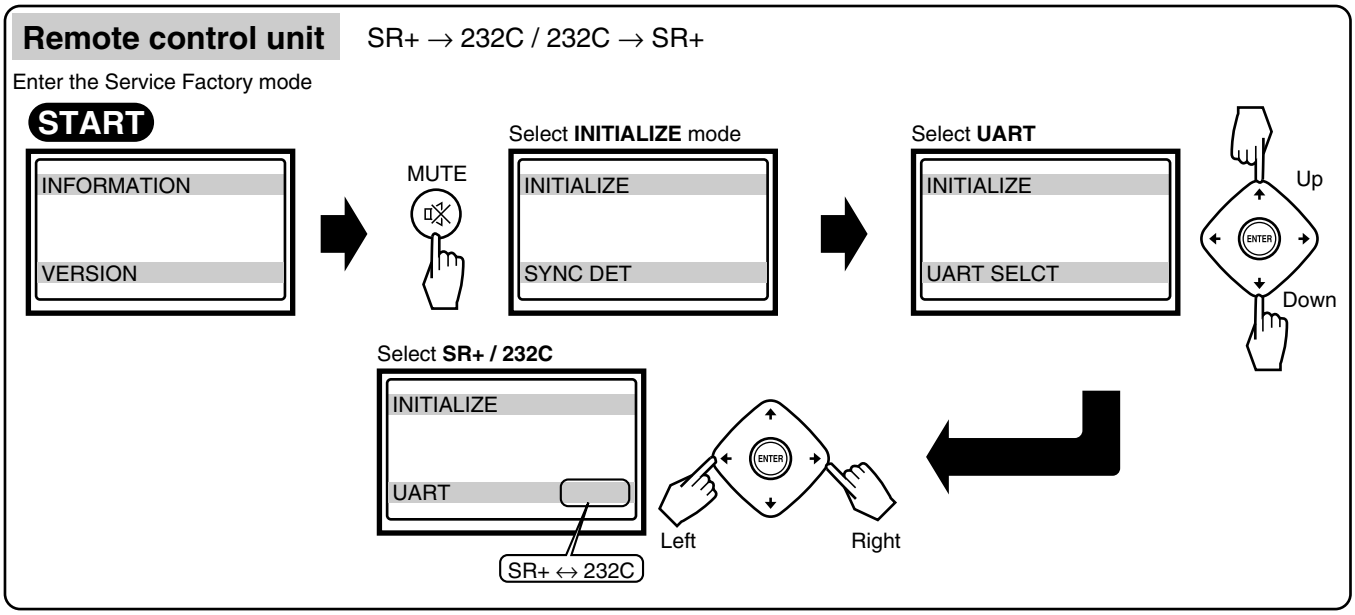
6.3 USING RS-232C COMMANDS

For the PDP-435HD and PDP-505HD series Plasma Displays, the circuitry is structured as shown in the diagram below to support the SR+ system. Controlling with either the SR+ system or RS-232C commands can be selected. As the SR+ system is selected at shipment, to control with RS-232C commands in servicing it is necessary to switch the paths. After servicing, be sure to return the setting to the SR+ system.

● Rough diagram of switching between SR+ and RS-232C



● How to switch from SR+ to RS-232C

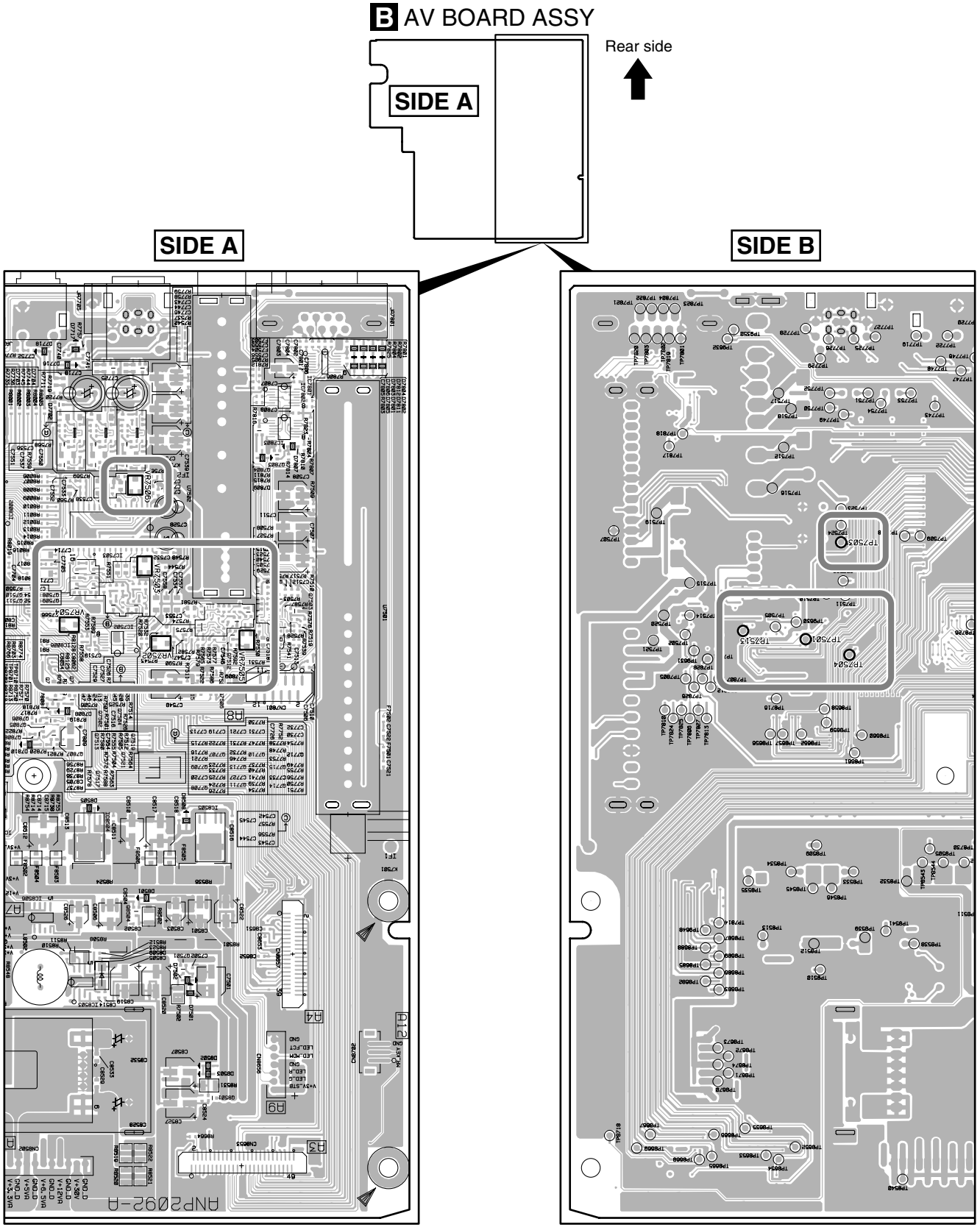


Tips: How to change the SR+/RS-232C setting without entering Service Factory mode
Hold the **VOLUME** ◿+ or ◿– key on the remote control unit pressed for 3-10 seconds during Standby mode.
Then within 3 seconds after the key is released, hold the **2-screen** ◑ key on the remote control unit pressed for 3-10 seconds.
Then within 3 seconds after the key is released, use the **SET** key on the remote control unit to set to RS-232C (the baud rate last selected is chosen) or the **HOME MENU** key to set to SR+.

6.4 ADJUSTMENT ITEMS

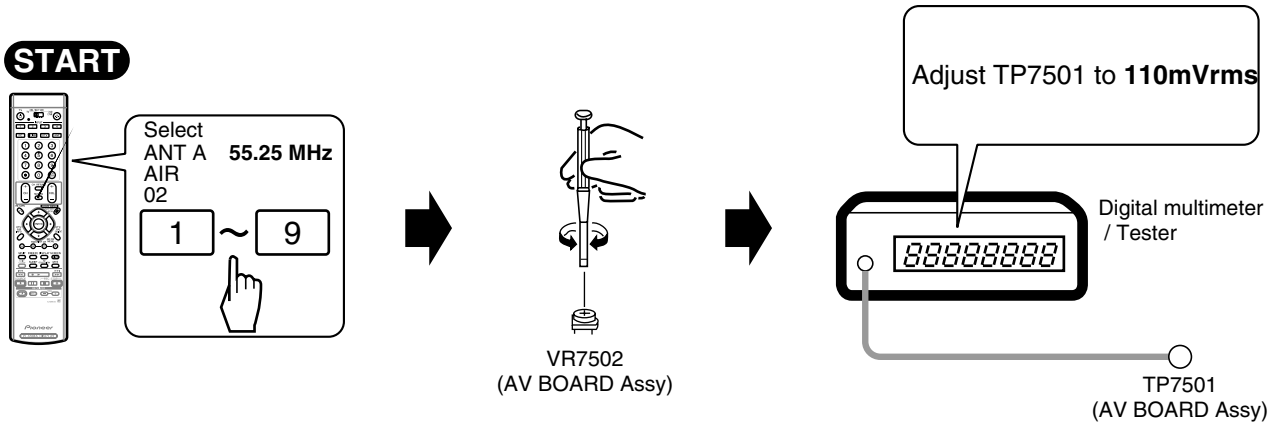
If readjustment is necessary because of adjustment error at shipment, perform adjustments as shown below.

● **Adjustment Points**



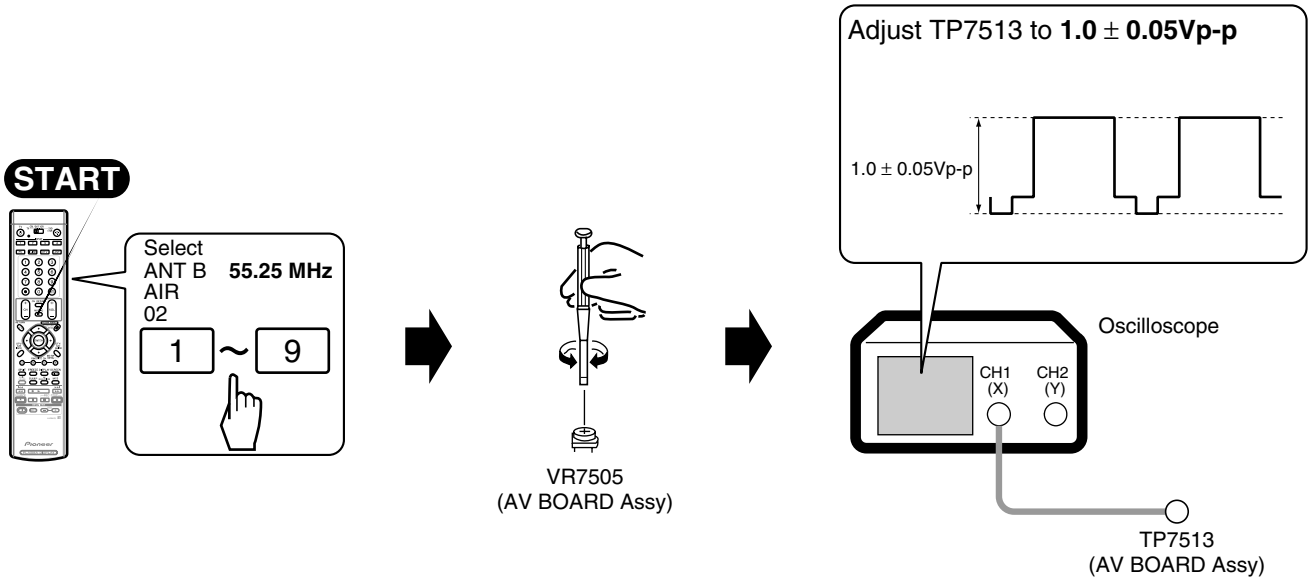
① Audio Level Adjustment

Equipment : SG, Digital mutimeter / Tester
Condition : Input RF level 60dBμV
1kHz MONO 100%



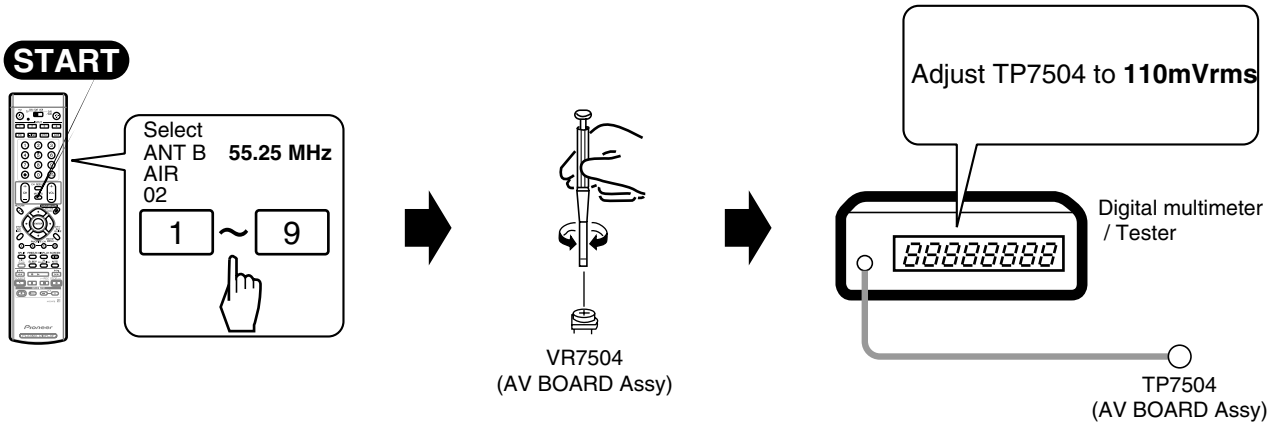
② Video Level Adjustment

Equipment : SG, Oscilloscope
Condition : Input RF level 60dBμV
Modulation 87.5%
White bar 100%



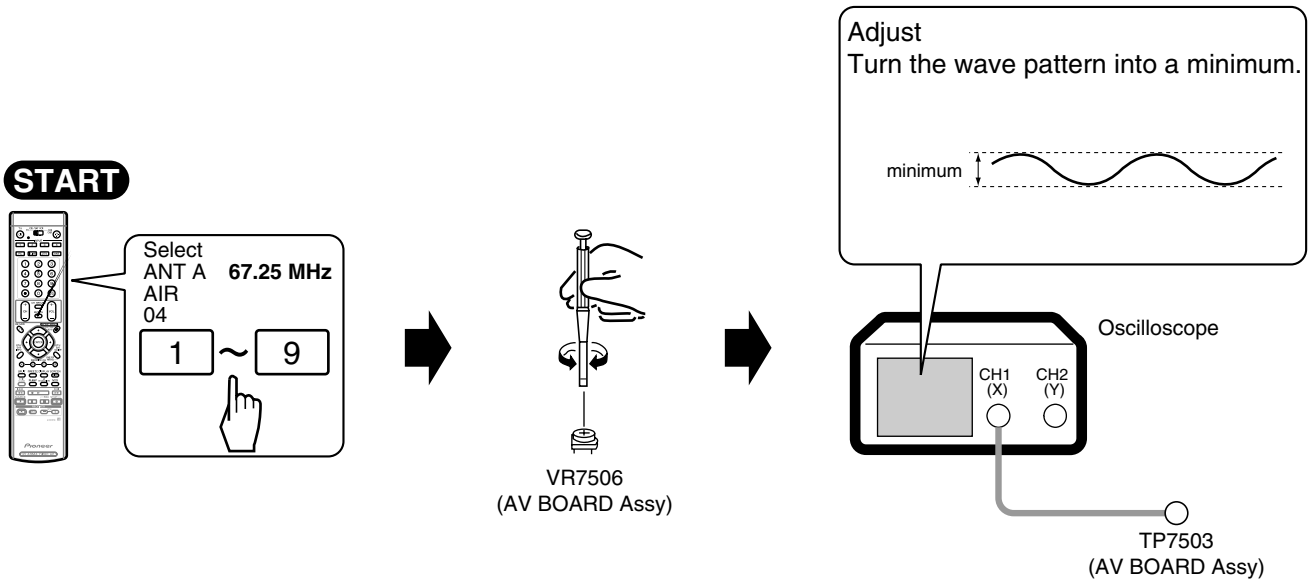
3 Audio Level Adjustment

Equipment : SG, Digital mutimeter / Tester
Condition : Input RF level 60dBμV
1kHz MONO 100%



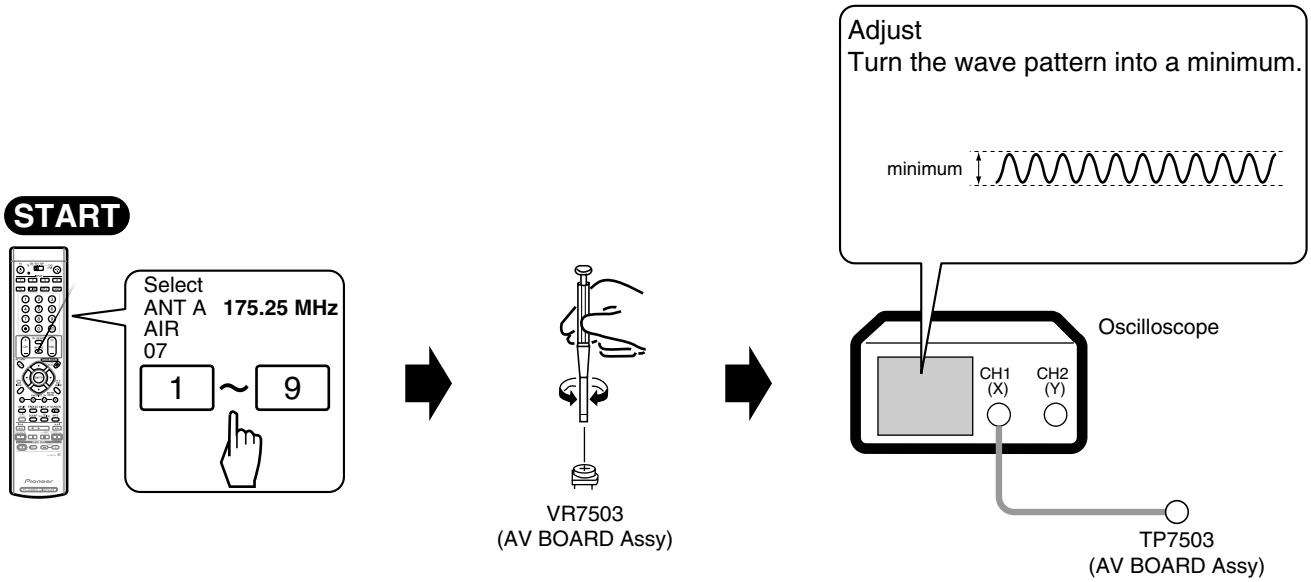
4 MSP Adjustment

Equipment : SG, Digital mutimeter / Tester
Condition : Input RF level 60dBμV
300Hz STEREO 100% Lch Only



5 MSP Adjustment

Equipment : SG
Condition : Input RF level 60dBμV
5kHz STEREO 100% Lch Only



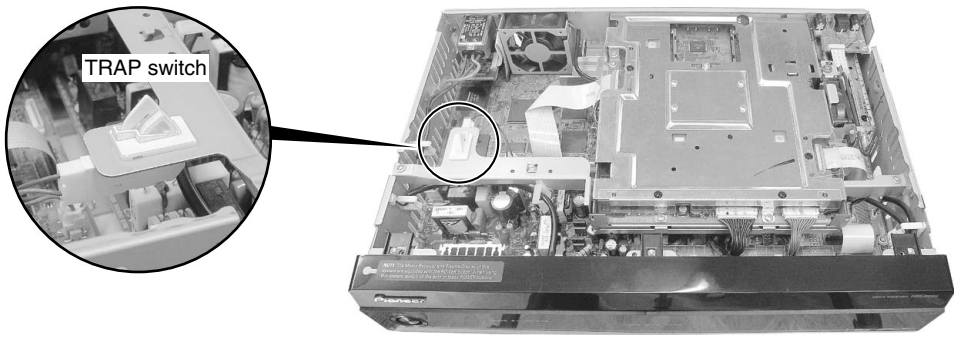
6.5 TRAP SWITCH

● Outline and Notes

A For video data transmission from the Media Receiver to the PDP-435HD and PDP-505HD-series Plasma Displays, digital signals are used. Therefore, this unit adopts the HDCP (High-bandwidth Digital Content Protection) system for copyright protection. This unit is also provided with a detection switch (TRAP switch) that will prohibit the unit from being turned on again "if the upper plate of the unit is accidentally opened," in order to prevent the panel technology from being leaked out.

The TRAP switch is disabled while the unit is turned off.
When performing internal diagnosis of the PDP, fix the switch to the OFF position using adhesive tape before turning on the unit. After servicing, be sure to remove the adhesive tape.

B



C

D

E

F

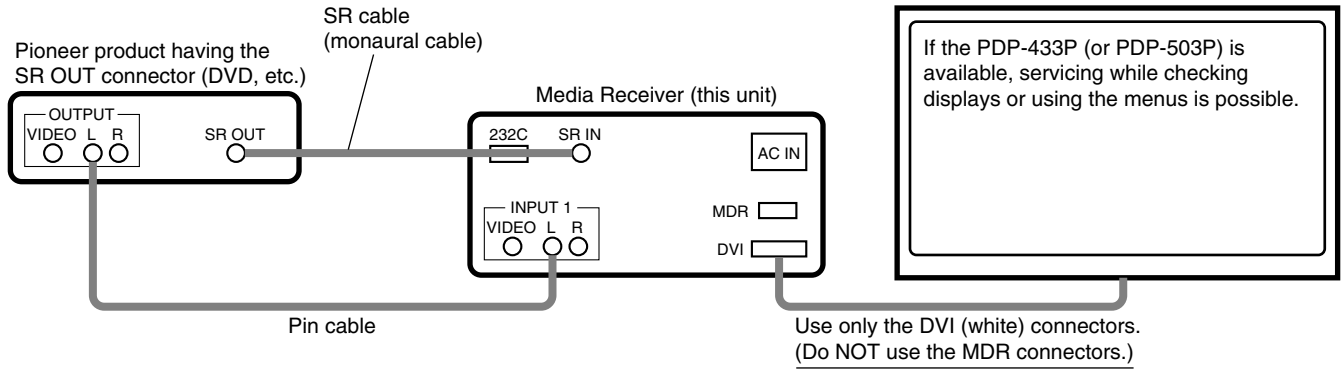
6.6 SERVICING USING ONLY THE MEDIA RECEIVER

For servicing of the PDP-435HD and PDP-505HD-series Plasma Display using only the Media Receiver, the following two methods can be used:

● Remote controlling using SR connections

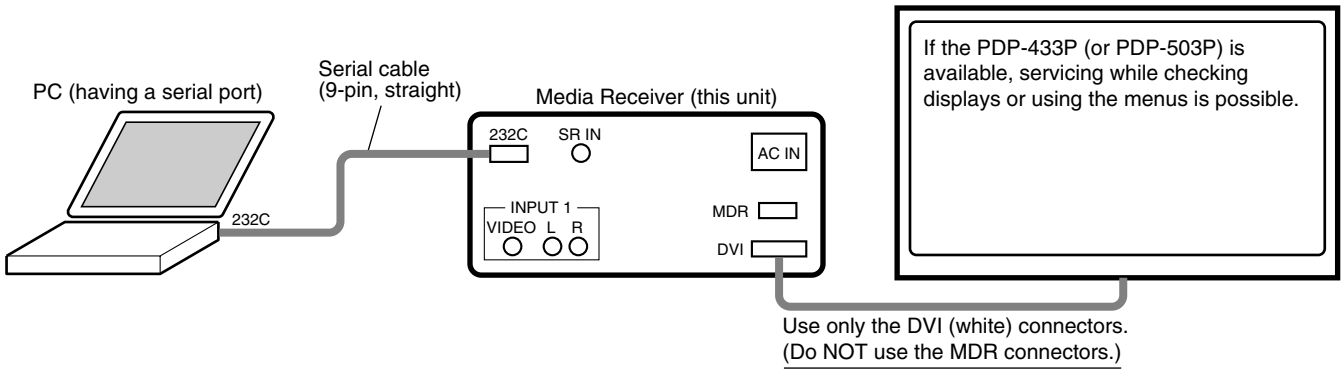
About connections

- Connect the SR OUT connector of a Pioneer product having that connector (a DVD in the following example) and the SR IN connector of the Media Receiver, using the SR cable. As the remote control sensor is not provided with the Media Receiver, this connection is required for using the remote control unit if the panel is not available. In this case, aim the remote control unit at the remote control sensor of the device (DVD in this case).
- Connect either the audio or the video output of the device (DVD in the example) and the corresponding audio or video input of the Media Receiver, using a cable with phono plugs. This connection is required in order to use ground in common with the SR cable, because with the SR cable connection the ground connection for signal reference is not available. In the example, the audio L channel is used, but the audio R channel or video can be used instead.
- If the plasma display for a previous model, such as the PDP-433P or PDP-503P, is available, servicing while checking displays or using the menus is possible. For this, connect only the DVI connectors (white) of the Media Receiver and the plasma display. The MDR connector of the Media Receiver must not be used, even though it has the same shape and number of pins, because signals assigned to the connectors differ. Using the MDR connector may damage the unit.



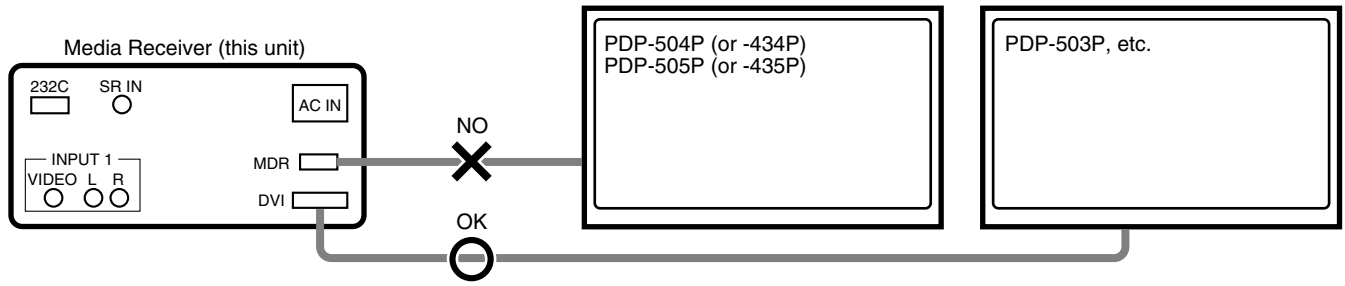
● RS-232C control using a PC

In this case the setting is RS-232C 38400bps, and the setting of "6.3. USING RS-232C COMMANDS" is not related.
Please set baud rate of PC in 38400bps.
For connection with the PC, use a straight cable.



● Note on connection

If the MDR connector of the PDP-434HD or -504HD-series is used, it is considered that the PDP-434P (or -504P) is connected, and the Media Receiver operates on such precondition, **which may result in a failure of the Media Receiver. Be sure not to connect to the MDR connector.** (Do NOT use the MDR connector when servicing the Media Receiver alone.)



6.7 SERVICE FACTORY MODE

To operate in Service Factory mode, use the supplied remote control unit.

How to enter Service Factory Mode

Prease refer to the technical documentation (Service Know-How). same as

Operation in Service Factory mode

● Functions whose settings are set to OFF

The settings for the following functions are set to OFF when Service Factory mode is entered (including when the "FAY" command is received):

- Two-screen operations (input function set on the main side is selected)
- P ZOOM
- STILL
- Detection of the TRAP switch (The log in the EEPROM is retained.)

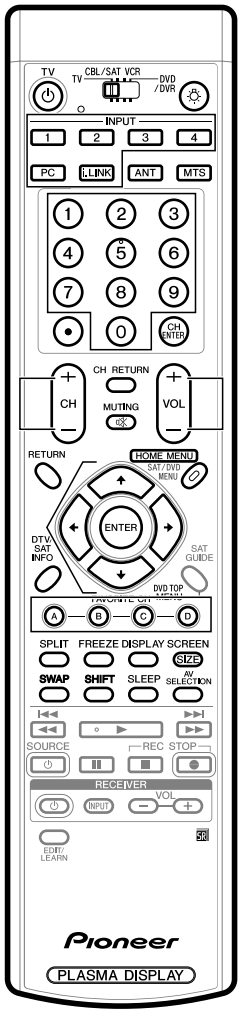
● User data

User data will be treated as follows:

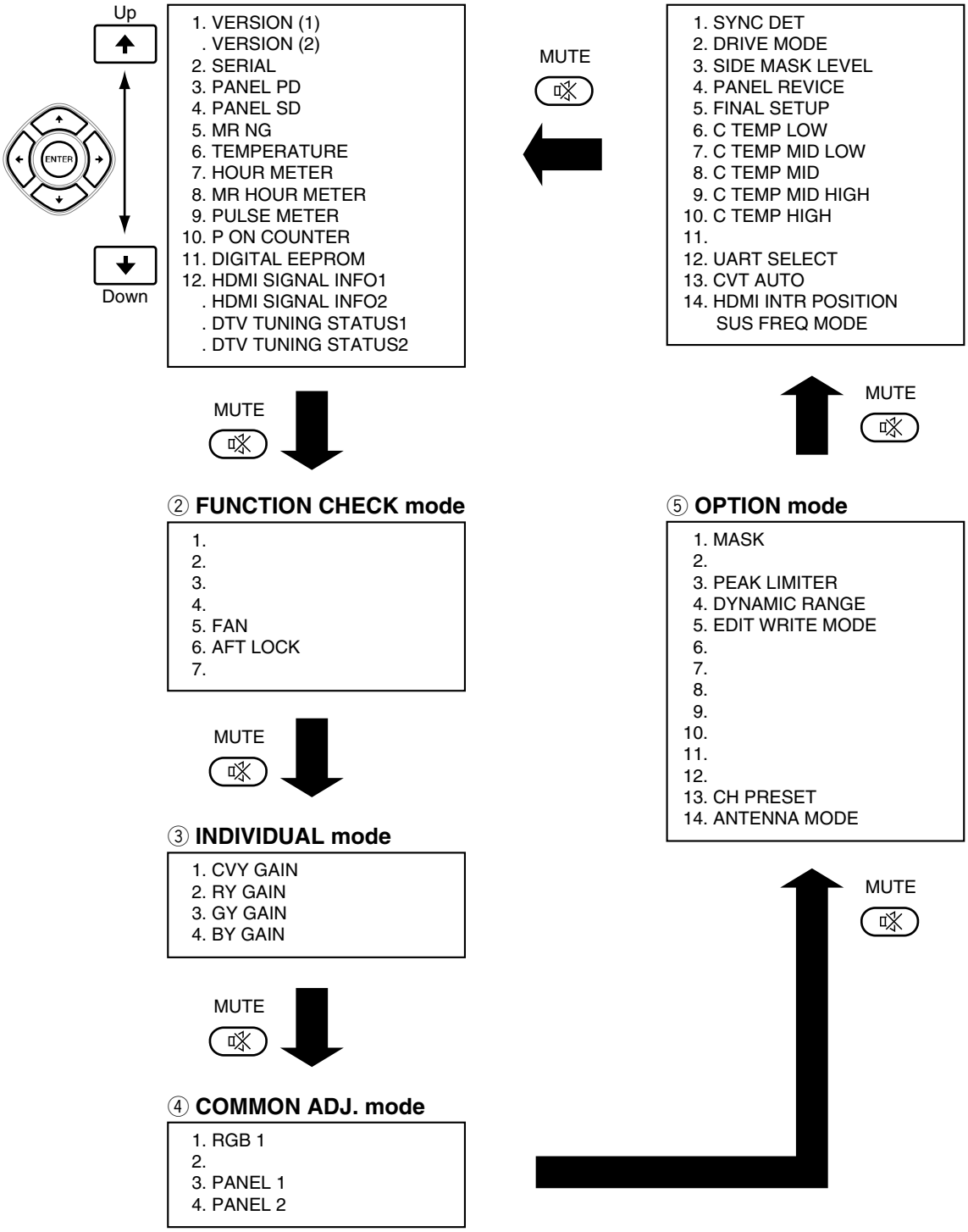
- User data on picture- and audio-quality adjustments are not reflected (data stored in memory will be retained).
- Data on screen position are reset to the default values (data stored in memory will be retained).

Remote control codes in Service Factory mode

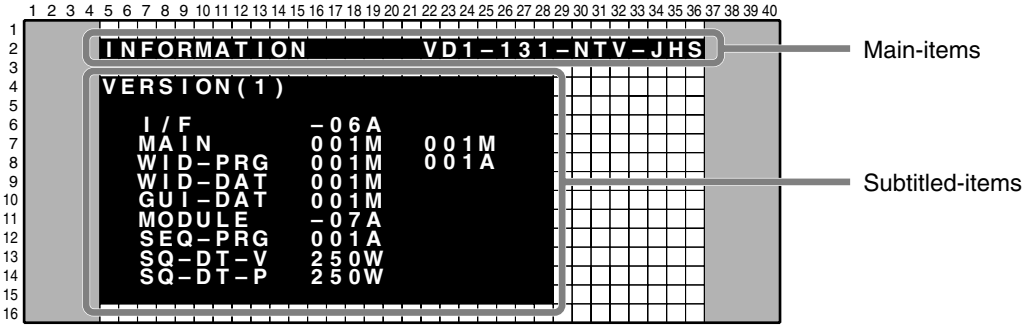
SR Function	Main Function	Remarks
Muting	Switching the main items	Shifting to the next main item
DOWN	Switching the subtitled items	Shifting downward to the next subtitled item
UP	Switching the subtitled items	Shifting upward to the next upper layer
LEFT	Increasing the adjustment value	Increasing the adjustment value
RIGHT	Decreasing the adjustment value	Decreasing the adjustment value
SET	Switching layers	Shifting downward or upward to the next lower or upper layer
INPUT	Selecting input	Shifting the input to the next function
INPUTxx	Selecting input	Switching the input to xx
CH+	Increasing the channel number	Advancing a preset channel (effective when Function is set to TV)
CH-	Decreasing the channel number	Turning a preset channel backward (effective when Function is set to TV)
Numeric keys	Function: TV	Function: TV (previously selected channel number is selected)
POWER	Power OFF	Turning the power off
FACTORY	Factory OFF	Turning Service Factory mode off
MENU	Menu ON	Turning Service Factory mode off and Menu mode on



Changes of the Service Factory menus

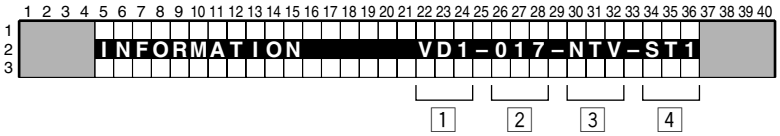


Indications in Service Factory mode



Main-item indications

Four parameters are displayed:



1 Input function

Input Functions	On-Screen Display
VIDEO1	VD1
Terrestrial wave A	ARA
Terrestrial wave B	ARB
CABLE A	CBA
CABLE B	CBB

2 SIG mode and screen size

Note: See SIG-Mode Tables. (See next page.)

3 Color system and signal type

Color System and Signal Type		On-Screen Display
NTSC	Composite input/ S-connector input	NTV
BLACK/WHITE		BWV
Y / CB / CR		CBR
Y / PB / PR		PBR
RGB		RGB
Digital video signal		DIG

4 Option (Destination, etc.)

Options	On-Screen Display
HD system in North America(Regular)	ATS
HD system in North America(ELITE)	AHS

● SIG-Mode Table

The signal mode is displayed in three characters:
First character: Resolution of the input signal (numerics for the video signals, and alphabetics for the PC signals)
Second character: Grouping of the V frequencies

SIG-Mode table for video signals (resolutions and V frequencies)

SIG-Mode	Signal Type	Vertical Frequency fv (Hz)	Horizontal Frequency fh (kHz)
13*	SDTV • 525i	60.000	15.750
21*	SDTV • 625i	50.000	15.625
33*	SDTV • 525p	60.000	31.500
41*	HDTV • 1125i	50.000	28.125
43*		60.000	33.750
51*	SDTV • 625p	50.000	31.250
61*	HDTV • 750p	50.000	37.500
63*		60.000	45.000

SIG-Mode table for PC signals (resolutions and V frequencies)

SIG-Mode	Signal Type	Vertical Frequency fv (Hz)	Horizontal Frequency fh (kHz)
A2*	720 × 400	56.000	24.825
A5*		70.087	31.469
A8*		85.050	37.861
B3*	640 × 480	59.940	31.469
B4*		66.666	35.000
B6*		72.809	37.861
B7*		75.000	37.500
B8*		85.000	43.300
C3*	852 × 480	60.000	31.680
D2*	800 × 600	56.250	35.1556
D3*		60.317	37.879
D6*		72.188	48.077
D7*		75.000	46.875
D8*		85.061	53.674
E7*	832 × 624	74.550	49.725
F3*	1024 × 768	60.004	48.363
F5*		70.069	56.476
F7*		75.029	60.023
F8*		84.997	68.677
G2*	1280 × 768	56.250	45.113
G3*		59.833	47.986
G5*		70.000	56.137

2nd Character	Reference V Frequency	Remarks
–	–	No signal
1	50	
2	56	
3	60	
4	66	
5	70	
6	For interpolation of 72-Hz area	For distinguishing between 70-Hz or 75-Hz area
7	75	
8	85	
9 (spare)	–	
?	–	Out of range

Third character: Selection of the screen size by the user is displayed.
(○: available, ×: not available)

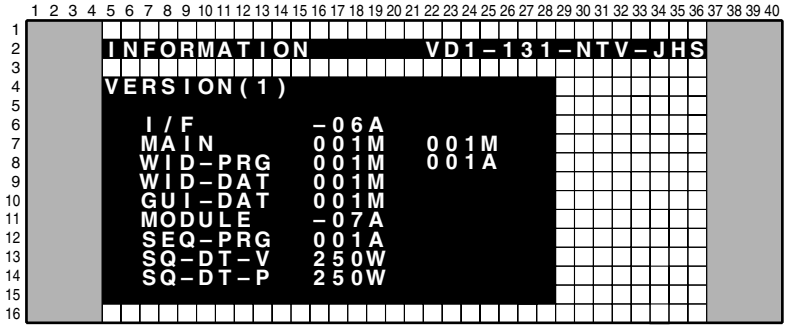
3rd Character	Description on GUI	VIDEO	PC	Remarks
0	DOT BY DOT	×	○	
1	4 : 3	○	○	
2	FULL (FULL1)	○	○	
3	ZOOM	○	×	
4	CINEMA	○	×	
5	WIDE	○	×	Indude WIDE-HD
6	FULL 14 : 9	○	×	
7	CINEMA 14 : 9	○	×	
8	FULL2	○	○	HDTV1035i
9	OVERSCAN	○	×	

① INFORMATION mode

● Operation items

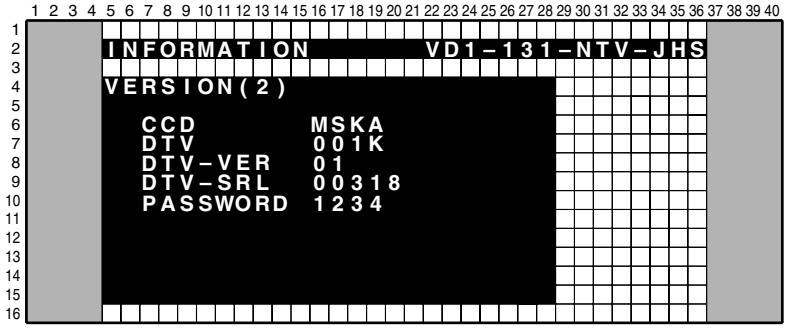
No.	Function / Display	Content
1	VERSION (1)	The flash memory versions for each device are displayed. (common part)
2	VERSION (2)	The flash memory versions for each device are displayed. (individual part)
3	SERIAL	For displaying the serial number of the product (not used)
4	PANEL PD	Power-down generated on the panel side and its time of occurrence are displayed.
5	PANEL SD	Shutdown generated on the panel side and its time of occurrence are displayed.
6	MR NG	Power-down and/or shutdown generated on the Media Receiver side and their/its time of occurrence are displayed.
7	TEMPERATURE	Information on temperature is displayed.
8	HOUR METER	Cumulative power-on time to the panel is displayed.
9	MR HOUR METER	Cumulative power-on time to the Media Receiver is displayed.
10	PULSE METER	The pulse meter value on the panel side is displayed.
11	P ON COUNTER	The number of times the power to the panel was turned on is displayed.
12	DIGITAL EEPROM	The status of the backup data for the module microcomputer is displayed.
13	HDMI SIGNAL INFO.	The file information of HDMI series are displayed.
14	DTV TUNING STATUS	Information of DTV Tuning Status are displayed.

1. VERSION (1)



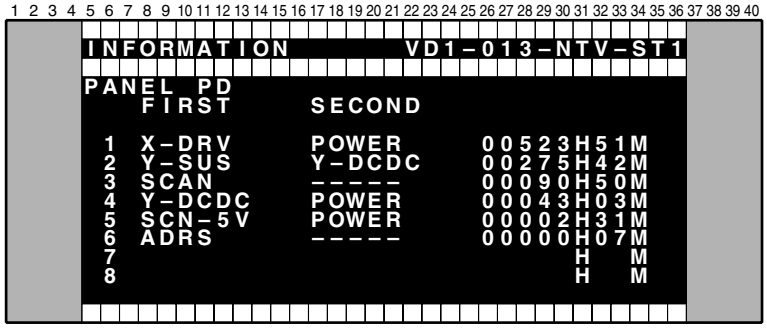
Flash memory of Device	On-Screen Display
User IF microcomputer (MR: IC8702)	I / F
Main microcomputer (MR: IC7207)	MAIN
Program for IC 3 (MR: IC7101)	WID–PRG
Enhanced data for IC 3 (MR: IC7101)	WID–DAT
GUI data for IC 3 (MR: IC7101)	GUI–DAT
Module microcomputer (for the PDP)	MODULE
Program for IC 4 (for the PDP)	SEQ–PRG
Sequence data for IC 4 Video	SQ–DT-V
Sequence data for IC 4 PC	SQ–DT-P

2. VERSION (2)



Device	Name Display	Version Display	Remarks
CCD-UCOM	CCD	4 character	
DTV Software Version	DTV	4 character	
DTV hardware Version	DTV-VER	2 character	
DTV hardware Serial	DTV-SRL	6 character	
USER Password	PASSWORD	4 character	

4. PANEL PD

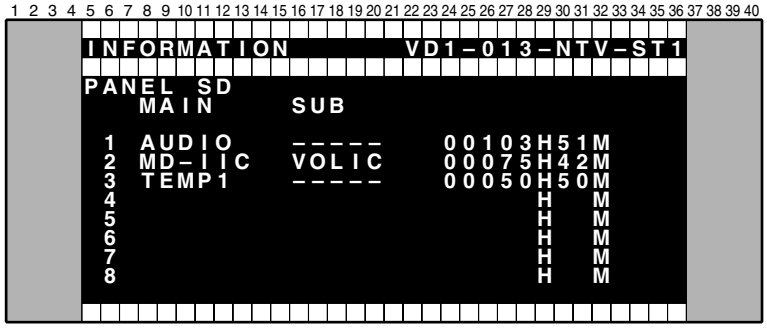


Power-down information only on the panel side is displayed.

• Panel power-down information

No.	Type of Power-down	On-Screen Display	No.	Type of Power-down	On-Screen Display
1	No corresponding item	- - - - -	8	Power-down of the address system	ADRS
2	Power-down of the main power supply system	POWER	9	Power-down of the X-DRIVE circuitry	X-DRV
3	Power-down of the scanning system	SCAN	A	Power-down of the X-DC/DC converter	X-DCDC
4	Power-down in the path between the scanning system and 5-V power supply	SCN-5V	B	Power-down of the X-SUS system	X-SUS
5	Power-down of the Y-Drive system	Y-DRV	C	Power-down of the driving IC power supply system	D-DCDC
6	Power-down of the Y-DC/DC converter	Y-DCDC	D	Power-down of the driving stopped	IC4 (IC5401)
7	Power-down of the Y-SUS system	Y-SUS	F	Power-down point unidentified	UNKNOWN

5. PANEL SD

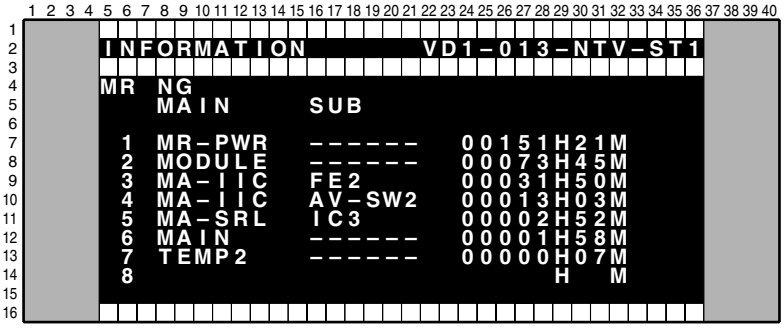


The shutdown log only on the panel side is displayed.

• Panel shutdown information

No.	Type of Shutdown	On-Screen Display (MAIN)	Remarks
1	Abnormality in IC 4 communication	IC4	
2	Abnormality in module microcomputer IIC communication	MD-IIC	Subcategories exist. (EROM4K : IC5206, EROM2K : IC402, VOLIC : IC3502)
3	Abnormality in RST2	RST2	
4	Abnormality in panel temperature	TEMP1	
5	Short-circuiting of the speakers	AUDIO	

6. MR NG



Information on power-down and shutdown of the Media Receiver side is displayed.

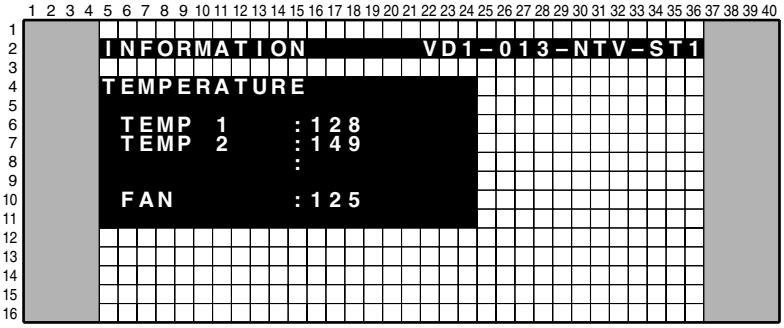
• Media Receiver NG information

No.	Type of Failure	On-Screen Display (MAIN)	Remarks
1	Abnormality in module microcomputer communication	MODULE	
2	Abnormality in 3-wire serial communication of the main microcomputer	MA-SRL	Subcategories exist.
3	Abnormality in main microcomputer IIC communication	MA-IIC	Subcategories exist.
4	Abnormality in main microcomputer communication	MAIN	
5	Abnormality in temperature of the Media Receiver	TEMP2	
6	Fan stopped.	FAN	
7	Abnormality in communication of the digital tuner	UART	Subcategories exist.
8	Abnormality in the ASIC power supply on the MR side	M-DCDC	

• Subcategory information

Type of Shutdown	Subcategory	Remarks
MA-SRL	IF microcomputer (IC8702), IC2 (IC7004), IC3 (IC7101)	
MA-IIC	MA-EEP (IC7205), IC1-M (IC6107), IC1-S (IC6255), HDMI1 (IC6801), HDMI2 (IC6881)*2, AD-M (IC6402), AD-S (IC6602), IC6 (IC6951), CCD (IC8903)*2, FE1 (U7501), FE2 (U7502)*2, AV-SW1 (IC8002), AV-SW2 (IC8005), TX-COM (IC8904)*3, MPX (IC7502)*3, TX-BSY(IC8904)*3	*2 : U.S. model only *3 : Europe model and General area model
Interval UART Communication	PS/RST	No power, or reset status continued
	RETRY	The signal 0x02 (ready) has not been received.
	DEVICE	Receive System Query Request Command
	CD-COM	PC Card Module Communication
	CD-DEV	PC Card Module
	CD-RST	PC Card Reset NG

7. TEMPERATURE

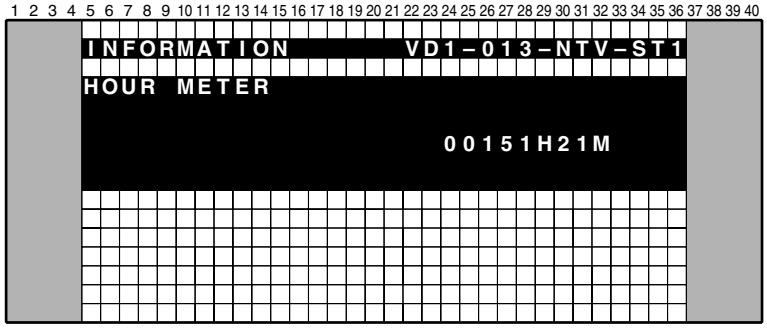


TEMP1: The value read from the temperature sensor built into the panel is displayed in the range of 000-255.
Note: Refer to the service manual of the panel.

TEMP2: The value read from the temperature sensor built into the Media Receiver is displayed in the range of 000-255. For reference, the approximate value for 60°C is 86 and for 35°C is 67.
Reference: When TEMP2 exceeds 100 (about 78°C), SD LED flash 11 times.

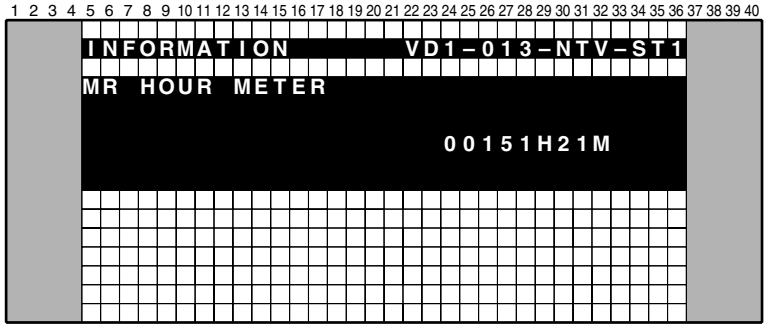
FAN: The value of the Fan output is displayed. At shipment, the output is controlled in 2 steps, and the value for strong output is set to about 131, and the value for weak output is set to about 93.

8. HOUR METER



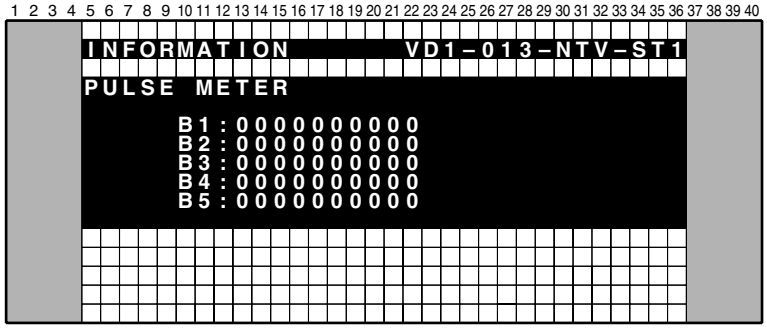
The cumulative power-on time of the panel is displayed.

9. MR HOUR METER



The cumulative power-on time of the Media Receiver is displayed.

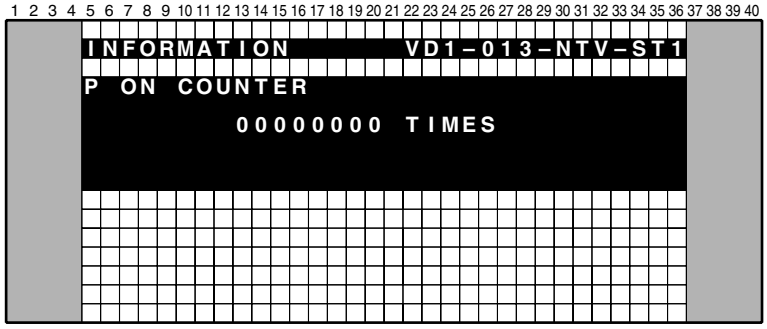
10. PULSE METER



The cumulative number of pulses of the panel is displayed.

Note : Dividing screen into sixteen times sixteen and counting five different locations on a screen. Each item, it's counted total 3840 pixels (for 50 inch) or 3072 pixels (for 43 inch) discharging. (1280/16 x 768/16 = 3840, 1204/16 x 768/16 = 3072)

11. P ON COUNTER

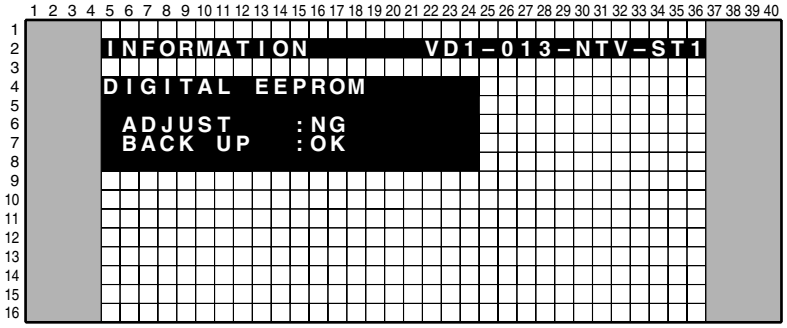


The cumulative number of times the panel was turned on is displayed.

12. DIGITAL EEPROM

When the DIGITAL Assy of the PDP is to be replaced, the adjustment values in it can be temporarily stored in the ROM then be written on the new Assy after replacement.

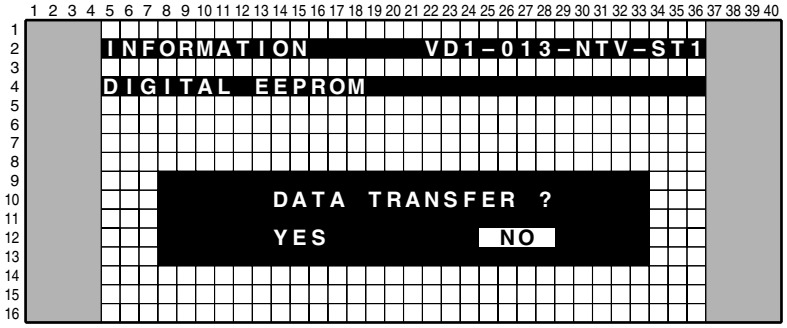
Whether adjustment has been made on the DIGITAL Assy of the PDP or not (i.e., in the state of a new service part), and whether the data on any adjustment values are retained in the backup ROM or not are displayed.



• Downloading the data from the backup ROM

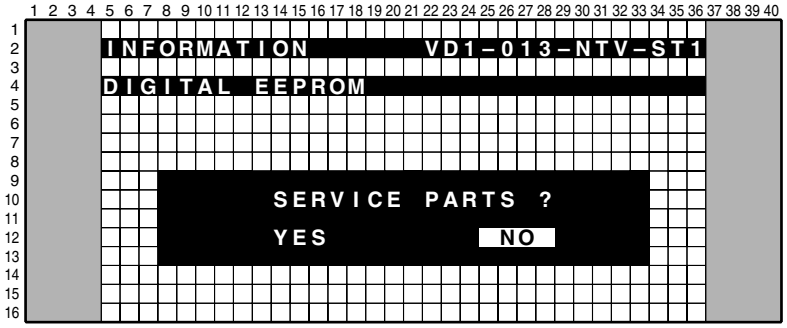
(This must be performed after the DIGITAL Assy is replaced.)

To download the data from the backup ROM, press the ENTER key while the above screen is displayed. The display changes as shown below. Move the cursor to YES then press the ENTER key. The data in the backup ROM are downloaded into the new Assy.

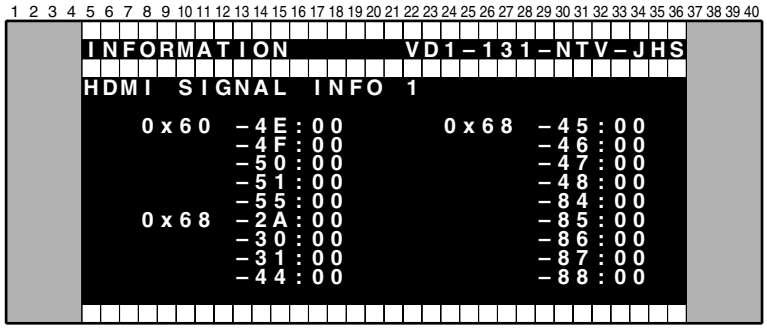


• Clearing the data in the ROM of the DIGITAL Assy

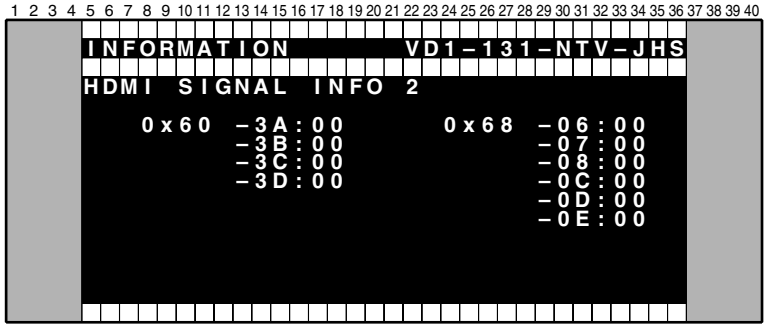
The display below is automatically displayed after either YES or NO is selected on the display shown above. Move the cursor to YES then press the ENTER key. Then all data on adjustment values in the ROM of the DIGITAL Assy are cleared.



13. HDMI SIGNAL INFO

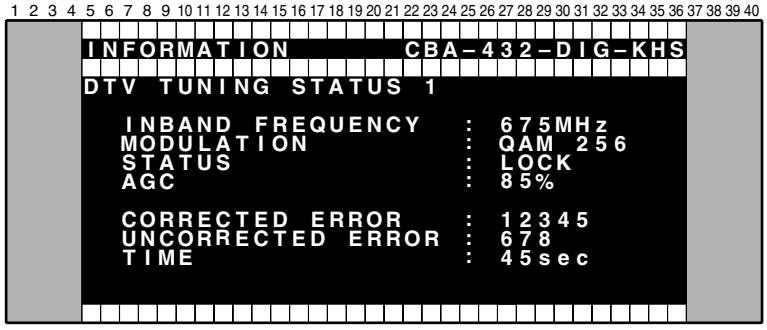


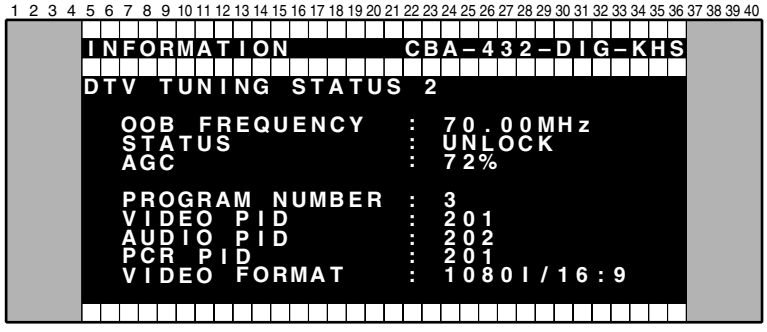
Technical examination display
(Reading status registers in HDMI receiver and displaying them by HEX value.)



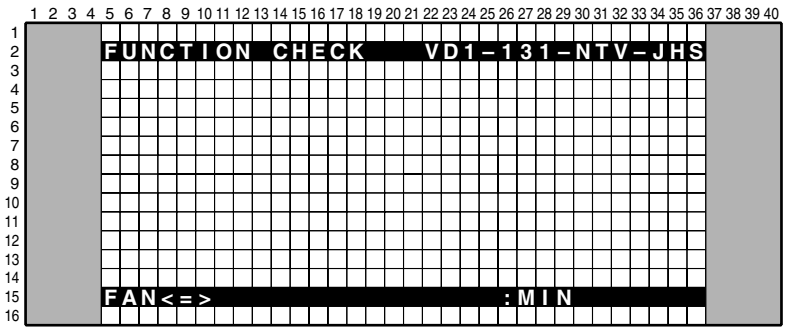
For technical discussion

14.DTV TUNING STATUS





② FUNCTION CHECK



No last memory in this menu

No.	Display	Detail	Remarks	232C Command
1	FAN <=>	MIN ⇔ CNT ⇔ MAX		*1
2	AFT <=>	UNLOCKED ⇔ LOCKED	For Factory use	AFT

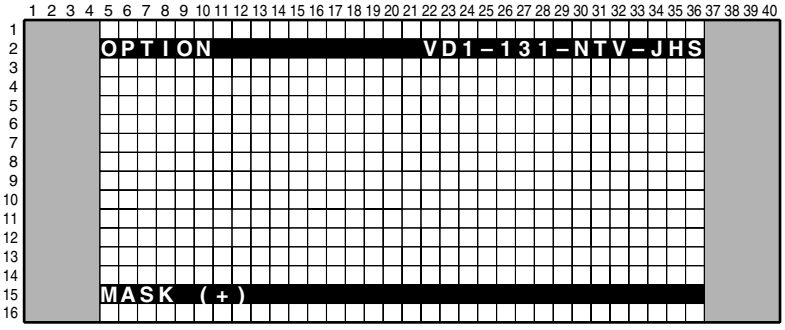
2.1 FAN

Controls FAN speed by force. (MIN : STOP, CNT : Follows movement specifications, MAX : High)
Temp sensor is working only displaying data value in service factory mode.
After getting off service factory mode, this function is set to normal automatically.

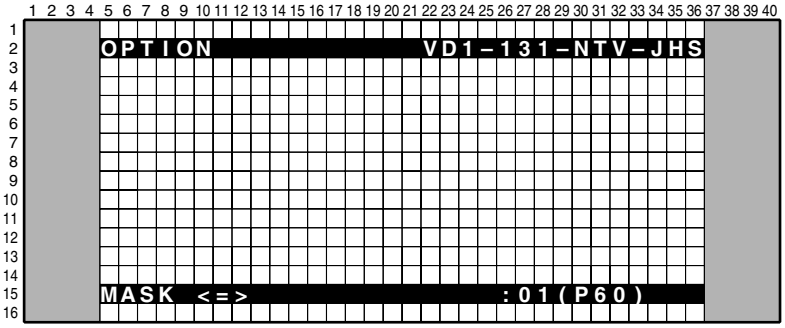
2.2 AFT LOCK

For production line use only
Stop AFT tuner received function and receive a center frequency.
After turning off a unit (including stand-by mode), this setting is set normal (AFT function) automatically.
It's performed to two tuner and DTV tuner to U.S. model.

⑤ OPTION mode



No.	Function/Display	Content	Corresponding RS-232C Command
1	MASK (+)	Selecting the pattern mask of IC4	MSK
2	PEAK LIMITTER	ON ⇔ OFF	PLT
3	DYNAMIC RANGE	ON ⇔ OFF	DYR
4	EDID WRITE MODE	DISABLE ⇔ ENABLE	EPA
5	CH PRESET	FACTORY ⇔ USER	



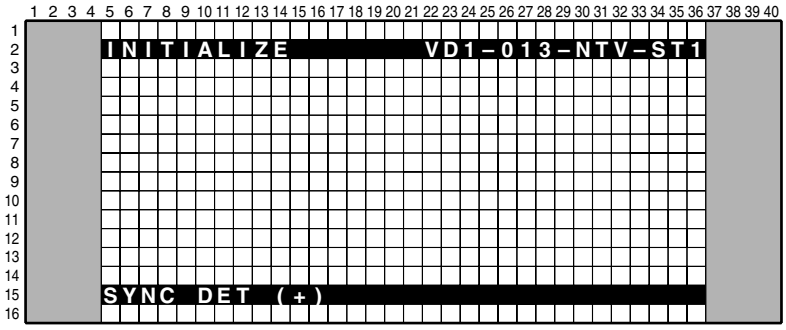
The mask frequency can be cyclically changed (see the table below) by pressing the left or right cursor key. The mask pattern can be cyclically changed by pressing the up or down cursor key. Approximately 2 seconds after either the up or down cursor key is pressed, the mask screen will appear.

• Frequency selection while the mask is displayed

No.	Function/Display	Content	Corresponding RS-232C Command
0	V50	Video 50-Hz sequence	F50
1	V60 (initial value)	Video 60-Hz sequence	F60
2	P60	PC 60-Hz sequence	F61
3	P70	PC 70-Hz sequence	F70
4	V72	Video 72-Hz sequence	F72
5	V75	Video 75-Hz sequence	F75

⑥ INITIALIZE mode

(For managing switching of the initial settings and destination setting)



No.	Function/Display	Content
1	SYNC DET (+)	
2	DRIVE MODE (+)	
3	SIDE MASK LEVEL (+)	
4	PANEL REVICE (+)	
5	FINAL SETUP (+)	
6	C TEMP LOW (+)	
7	C TEMP MID LOW (+)	
8	C TEMP MID (+)	
9	C TEMP MID HIGH (+)	
10	C TEMP HIGH (+)	
11	UART SELECT <=>	1200-232C ⇔ ••• ⇔ 38400-232C ⇔ 9600-SR+
12	CVT AUTO <=>	DISABLE ⇔ ENABLE (For Factory use)
13	HDMI INTR POSITION(+)	
14	SUS FREQ MODE<=>	000⇔ ••• ⇔ 007

- When there is a modification log, if the “Display” key is held pressed for at least 3 seconds while the above display is displayed, the modification log will be cleared.

• UART SELCT

Option No.	Function / Display	Operation / Control	Remarks
1 (initial setting)	9600-SR+	To set to SR+ (9600 BPS)	For switching external communication between RS-232C and SR+
2	1200-232C	To set to RS-232C (1200 BPS)	
3	2400-232C	To set to RS-232C (2400 BPS)	
4	4800-232C	To set to RS-232C (4800 BPS)	
5	9600-232C	To set to RS-232C (9600 BPS)	
6	19200-232C	To set to RS-232C (19200 BPS)	
7	38400-232C	To set to RS-232C (38400 BPS)	

Tips: How to change the SR+/RS-232C setting without entering Service Factory mode
Refer to "6.3 USING RS-232C COMMANDS".

6.8 LIST OF RS-232C COMMANDS

RS-232C commands can be used in Service Factory mode.
Before using RS-232C commands, it is necessary to change the factory presetting. See "6.3. USING RS-232C COMMANDS."

Command	Operation	Remarks
A		
ABL	Adjusting power consumption	
B		
BCP	Transmitting the backup data to the DIGITAL Assy	
BYG	BY GAIN	
C		
CHM	Clearing the hour meter	
CNG	Clearing MR NG information	
CPC	Clearing the power-on counter	
CPD	Clearing power-down information	
CPM	Clearing the pulse meter	
CSD	Clearing shutdown information	
D		
OSDS01	Turning on the on-screen display	While the OSDSOI command is in force, the duration of on-screen display is
OSDS00	Turning off the on-screen display	On-screen display is prohibited.
DRF	Turning off the power for the drive system	
DRN	Turning on the power for the drive system	
DW*	Decreasing the adjustment value by *	*: 1-9, 0 (0 means 10), or F (making the adjustment value the minimum)
E		
EDWS00	Prohibiting writing of EDID data	
EDWS01	Permitting writing of EDID data	
F		
F50	Video 50-Hz sequence	
F60	Video 60-Hz sequence	
F61	PC 60-Hz sequence	
F70	PC 70-Hz sequence	
F72	Video 72-Hz sequence	
F75	Video 75-Hz sequence	
FAJ	Determining the adjustment values for the unit	
FAY	Turning Service Factory mode on	
FAN	Turning Service Factory mode off	The GUI equivalent to that usually displayed when the power is turned on is displayed.
G		The GET-group commands are effective at any time, including during Standby mode.
GAJ	Obtaining the adjustment values for the panel	
GMM	Switching the gamma levels	Setting value: 000-007
GNG	Obtaining NG data of the MR	
GNM	Obtaining the serial No. of the MR	
GPC	Obtaining the P ON COUNTER value	
GPD	Obtaining power-down information	
GPR	Obtaining the PANEL REVISE data	
GPM	Obtaining the PULSE METER data	
GPW	Obtaining the PANEL W/B data	
GS1	Obtaining the version data for each device	
GS2	Obtaining data on various operations	
GS6	Obtaining the any version	
GSD	Obtaining shutdown information	
GSL	Adjusting side mask G	

Command	Operation	Remarks
I		
INPS01	Input selection: Input 1	
INPS02	Input selection: Input 2	
INPS03	Input selection: Input 3	
INPS04	Input selection: Input 4	
INPS05	Input selection: Input 5	
INA	Selection of the tuner for terrestrial analog signals (Antenna A)	
INB	Selection of the tuner for terrestrial analog signals (Antenna B)	
ING	Selection of iLink input functions	
M		
MSKS00	Mask mode: OFF	
MSKS01	White: 0-100%	
MSKS02	Aging mask	
MSKS03	Aging mask (detection of still picture: OFF)	
MSKS10	RAMP slant 1	
MSKS11	RAMP slant 4	
MSKS12	RAMP slant 1 shifting	
MSKS13	RAMP slant 4 shifting	
MSKS14	V RAMP	
MSKS15	H/V RAMP	
M1G	IC1 MAIN GAIN	
M1O	IC1 MAIN OFFSET	
MSKS20	WINDOW-Low: 102 / High: 870	
MSKS21	WINDOW-Low: 102 / High: 1023	
MSKS22	WINDOW-Low: 0 / High: 1023	
MSKS23	WINDOW-High: 1023 (CENTER)	
MSKS24	WINDOW-PEAK WINDOW	Area 1.25%
MSKS25	WINDOW-1/7 vertical window	
MSKS26	WINDOW-magenta/green stripe	
MSKS27	WINDOW-green/magenta stripe	
MSKS28	Window (black & white [1 × 8], checkered pattern [for EMG check])	
MSKS29	Window (for W/B adjustment, magenta, yellow)	
MSKS40	Wiper to prevent phosphor burn	
MSKS30	COLOR BAR	
MSKS31	Slanted lines	
MSKS51	Raster-white	
MSKS52	Raster-red	
MSKS53	Raster-green	
MSKS54	Raster-blue	
MSKS55	Raster-black	
MSKS56	Raster-cyan	
MSKS57	Raster-magenta	
MSKS58	Raster-yellow	
MSKS59	Raster-cyan 274	
MSKS60	Raster-50 flesh color	
MSKS61	Raster-50 light purple	
MSKS62	Raster-50 sky blue	
MSKS63	Raster-red 779	
MSKS64	Raster-cyan 218	
MSKS65	Raster-cyan 448	
MSKS66	Raster-43 flesh color	
MSKS67	Raster-red 640	
MSKS68	Raster-magenta 98	
MSKS69	Raster-43 sky blue 1	
MSKS70	Raster-43 sky blue 2	
MSKS71	Raster-43 light purple	
MSKS72	Raster-blue 960	
MSKS73	Raster-gray 511 (spare)	
MSKS74	Raster-gray 511 (spare)	

Command	Operation	Remarks
M		
MRG	AD MAIN R GAIN	
MRO	AD MAIN R OFFSET	
MGG	AD MAIN G GAIN	
MGO	AD MAIN G OFFSET	
MBG	AD MAIN B GAIN	
MBO	AD MAIN B OFFSET	
P		
PBH	Panel W/B B-HIGH adjustment	
PBL	Panel W/B B-LOW adjustment	
PGH	Panel W/B G-HIGH adjustment	
PGL	Panel W/B G-LOW adjustment	
POF	Turning the power OFF	
PRH	Panel W/B R-HIGH adjustment	
PRL	Panel W/B R-LOW adjustment	
R		
RYG	RY GAIN	
RSL	Adjustment of side mask R	
S		
S1G	IC1 SUB GAIN	
S1O	IC1 SUB OFFSET	
SBG	AD SUB B GAIN	
SBO	AD SUB B OFFSET	
SFI	Initialization of the full mask table	
SGG	AD SUB G GAIN	
SGO	AD SUB G OFFSET	
SRG	AD SUB R GAIN	
SRO	AD SUB R OFFSET	
T		
TSY	Enabling the TRAP switch	The command is effective even during Standby mode.
U		
UP*	Increasing the adjustment value by *	*: 1-9, 0 (0 means 10), or F (making the adjustment value the maximum)
UAJ	Resetting all data in the DIGITAL Assy to those of a new service part	
V		
VOF	Offset voltage adjustment	
VSU	SUS voltage adjustment	
X		
XD1	D1 trailing-edge pulse of X-SUS	
XD2	D2 trailing-edge pulse of X-SUS	
XU1	U1 leading-edge pulse of X-SUS	
XU2	U2 leading-edge pulse of X-SUS	
Y		
YD1	D1 trailing-edge pulse of Y-SUS	
YD2	D2 trailing-edge pulse of Y-SUS	
YD3	D3 trailing-edge pulse of Y-SUS	
YD4	D4 trailing-edge pulse of Y-SUS	
YU1	U1 leading-edge pulse of Y-SUS	
YU2	U2 leading-edge pulse of Y-SUS	

6.9 OUTLINE OF COMMANDS

■ GET Commands

GS1: Returning information on the model and the version of the software

Order	Data	Size
1	Data on the display	3 bytes
2	Version of the module microcomputer	4 bytes
3	Version of the IC4-MANTA	4 bytes
4	Sequence version (50VIDEO)	4 bytes
5	Sequence version (50PC)	4 bytes
6	Sequence version (43VIDEO)	4 bytes
7	Sequence version (43PC)	4 bytes
8	Version of the IF microcomputer	4 bytes
9	Version of the main microcomputer boot Software	4 bytes
10	Version of the main microcomputer	4 bytes
11	Version of the IC3 boot Software	4 bytes
12	Version of the IC3 Program	4 bytes
13	Version of the IC3 Enhanced	4 bytes
14	Version of the IC3 GUI	4 bytes

Breakdown of the data on the display

Data	Model
HD5	PDP-505HD series
HD4	PDP-435HD series

GPM: Returning the data of the PDP pulse meter

Order	Data	Size
1	Pulse meter (Block area 1)	10 bytes
2	Pulse meter (Block area 2)	10 bytes
3	Pulse meter (Block area 3)	10 bytes
4	Pulse meter (Block area 4)	10 bytes
5	Pulse meter (Block area 5)	10 bytes

Note: Refer to the service manual of the panel.

GPC: Returning the cumulative number of times the power to the PDP was turned on

Order	Data	Size
1	Power-on counter	8 bytes

• Commands for clearing the logs

Parameter	Corresponding RS-232C Command
PD INFO	CPD
SD INFO	CSD
NG INFO	CNG
HOUR METER	CHM
MR HOUR METER (Only for the system model)	CHR
PULSE METER	CPM
P ON COUNTER	CPC

GPD: Returning the power-down data (log) of the PDP

Order	Data	Size	Order	Data	Size
1	Latest "1st PD" data	1 byte	17	Fifth latest “1st PD” data	1 byte
2	Latest "2nd PD" data	1 byte	18	Fifth latest “2nd PD” data	1 byte
3	Data of hour meter for the latest PD	7 bytes	19	Data of hour meter for the fifth latest PD	7 bytes
4	Data on temperature for the latest PD (TEMP1)	3 bytes	20	Data on temperature for the fifth latest PD (TEMP1)	3 bytes
5	Second latest “1st PD” data	1 byte	21	Sixth latest “1st PD” data	1 byte
6	Second latest “2nd PD” data	1 byte	22	Sixth latest “2nd PD” data	1 byte
7	Data of hour meter for the second latest PD	7 bytes	23	Data of hour meter for the sixth latest PD	7 bytes
8	Data on temperature for the second latest PD (TEMP1)	3 bytes	24	Data on temperature for the sixth latest PD (TEMP1)	3 bytes
9	Third latest “1st PD” data	1 byte	25	Seventh latest “1st PD” data	1 byte
10	Third latest “2nd PD” data	1 byte	26	Seventh latest “2nd PD” data	1 byte
11	Data of hour meter for the third latest PD	7 bytes	27	Data of hour meter for the seventh latest PD	7 bytes
12	Data on temperature for the third latest PD (TEMP1)	3 bytes	28	Data on temperature for the seventh latest PD (TEMP1)	3 bytes
13	Fourth latest “1st PD” data	1 byte	29	Eighth latest “1st PD” data	1 byte
14	Fourth latest “2nd PD” data	1 byte	30	Eighth latest “2nd PD” data	1 byte
15	Data of hour meter for the fourth latest PD	7 bytes	31	Data of hour meter for the eighth latest PD	7 bytes
16	Data on temperature for the fourth latest PD (TEMP1)	3 bytes	32	Data on temperature for the eighth latest PD (TEMP1)	3 bytes

• Details on "1st/2nd PD" data

Data	Power-down Point
0	No power-down
1	Not used (for MR-POWER)
2	P-POWER
3	SCAN
4	SCN-5V
5	Y-DRIVE
6	Y-DCDC
7	Y-SUS
8	ADRS
9	X-DRIVE
A	X-DCDC
B	X-SUS
C	DIG-DCDC
D	IC4
F	Power-down point not identified

GSD: Returning the shutdown data (log) of the PDP

Order	Data	Size	Order	Data	Size
1	Latest SD data	1 byte	17	Fifth latest SD data	1 byte
2	Data of subcategory for the latest SD	1 byte	18	Data of subcategory for the fifth latest SD	1 byte
3	Data of hour meter for the latest SD	7 bytes	19	Data of hour meter for the fifth latest SD	7 bytes
4	Data on temperature for the latest SD (TEMP1)	3 bytes	20	Data on temperature for the fifth latest SD (TEMP1)	3 bytes
5	Second latest SD data	1 byte	21	Sixth latest SD data	1 byte
6	Data of subcategory for the second latest SD	1 byte	22	Data of subcategory for the sixth latest SD	1 byte
7	Data of hour meter for the second latest SD	7 bytes	23	Data of hour meter for the sixth latest SD	7 bytes
8	Data on temperature for the second latest SD (TEMP1)	3 bytes	24	Data on temperature for the sixth latest SD (TEMP1)	3 bytes
9	Third latest SD data	1 byte	25	Seventh latest SD data	1 byte
10	Data of subcategory for the third latest SD	1 byte	26	Data of subcategory for the seventh latest SD	1 byte
11	Data of hour meter for the third latest SD	7 bytes	27	Data of hour meter for the seventh latest SD	7 bytes
12	Data on temperature for the third latest SD (TEMP1)	3 bytes	28	Data on temperature for the seventh latest SD (TEMP1)	3 bytes
13	Fourth latest SD data	1 byte	29	Eighth latest SD data	1 byte
14	Data of subcategory for the fourth latest SD	1 byte	30	Data of subcategory for the eighth latest SD	1 byte
15	Data of hour meter for the fourth latest SD	7 bytes	31	Data of hour meter for the eighth latest SD	7 bytes
16	Data on temperature for the fourth latest SD (TEMP1)	3 bytes	32	Data on temperature for the eighth latest SD (TEMP1)	3 bytes

• Details on the shutdown data

Data	Cause of Shutdown
0	No abnormality
1	IC4 (IC5401)
2	Module microcomputer IIC
3	Abnormality in RST2 (power decrease of DC-DC converter)
4	Panel having abnormally high temperature
5	Audio failure (short-circuiting of the speakers)
6 - F	Spares

• Data on the shutdown subcategories for the module microcomputer IIC

Data	Cause of Shutdown
0	No subcategory
1	EEPROM (4k) (IC5206)
2	EEPROM (2k) (IC4002)
3	Volume IC (IC3502)

GNG: Returning the data (logs) on power-down and shutdown of the Media Receiver

Order	Data	Size	Order	Data	Size
1	Latest NG data	1 byte	17	Fifth latest NG data	1 byte
2	Data of subcategory for the latest NG	1 byte	18	Data of subcategory for the fifth latest NG	1 byte
3	Data of MR hour meter for the latest NG	7 bytes	19	Data of MR hour meter for the fifth latest NG	7 bytes
4	Data on temperature for the latest NG (TEMP2)	3 bytes	20	Data on temperature for the fifth latest NG (TEMP2)	3 bytes
5	Second latest NG data	1 byte	21	Sixth latest NG data	1 byte
6	Data of subcategory for the second latest NG	1 byte	22	Data of subcategory for the sixth latest NG	1 byte
7	Data of MR hour meter for the second latest NG	7 bytes	23	Data of MR hour meter for the sixth latest NG	7 bytes
8	Data on temperature for the second latest NG (TEMP2)	3 bytes	24	Data on temperature for the sixth latest NG (TEMP2)	3 bytes
9	Third latest NG data	1 byte	25	Seventh latest NG data	1 byte
10	Data of subcategory for the third latest NG	1 byte	26	Data of subcategory for the seventh latest NG	1 byte
11	Data of MR hour meter for the third latest NG	7 bytes	27	Data of MR hour meter for the seventh latest NG	7 bytes
12	Data on temperature for the third latest NG (TEMP2)	3 bytes	28	Data on temperature for the seventh latest NG (TEMP2)	3 bytes
13	Fourth latest NG data	1 byte	29	Eighth latest NG data	1 byte
14	Data of subcategory for the fourth latest NG	1 byte	30	Data of subcategory for the eighth latest NG	1 byte
15	Data of MR hour meter for the fourth latest NG	7 bytes	31	Data of MR hour meter for the eighth latest NG	7 bytes
16	Data on temperature for the fourth latest NG (TEMP2)	3 bytes	32	Data on temperature for the eighth latest NG (TEMP2)	3 bytes

• Details on the NG data

Data	Cause of Shutdown
0	No abnormality
1	Power-down of the MR power supply
2	Communication failure of the module microcomputer
3	Three-wire serial communication failure of the main microcomputer
4	IIC communication failure of the main microcomputer
5	Communication failure of the main microcomputer
6	MR having abnormally high temperature
7	Fan stopped
8	Failure of the UART communication
9	Abnormality in RST2 of the MR (power decrease of DC-DC converter)

• Data on the subcategories for failure in 3-wire serial communication of the main microcomputer

Data	Cause of Shutdown
0	No subcategory
1	Communication failure of the IF microcomputer
2	IC2 communication failure
3	IC3 communication failure

• Data on the subcategories for failure in the digital tuner

Data	Cause of Shutdown
0	No subcategory (DTV for North America)
1	Communication failure of the DTV microcomputer (PS/RST)
2	DTV NG (DEVICE)
3	DTV microcomputer (CMD)
4	DTV microcomputer communication (RETRY)
5	PC CARD Communication NG (CD-COM)
6	PC CARD Mdule (CD-DEV)
7	PC CARD Reset NG (CD-RST)

• Data on the subcategories for failure in IIC communication of the main microcomputer

Data	Cause of Shutdown
0	No subcategory
1	EEPROM (128k) (IC7205)
2	GCR (Only domestic model)
3	IC1 main (IC6107)
4	IC1 sub (IC6255)
5	AD-PLL main (IC6402)
6	AD-PLL sub (IC6602)
7	IC6 (IC6951)
8	HDMI1(IC6801)
9	HDMI2(IC6881)
A	7-3VIDEO SW (IC8002)
B	6-2RGB SW (IC8005)
C	Front end 1 (U7501)
D	Front end 2 (U7502)
E	CC UCOM (IC8903)
F	PANEL LINK TX (IC7401)
G	PANEL LINK RX
H	Not used
I	Not used
K	AV-EEP ROM

GAJ: Returning drive-related adjustment values of the PDP

Order	Data	Size
1	Currently used ABL table	3 bytes
2	Upper limit of the electric power	3 bytes
3	Vsus adjustment value	3 bytes
4	Vofs adjustment value	3 bytes
5	X-SUS-U1 adjustment value (XU1)	3 bytes
6	X-SUS-U2 adjustment value (XU2)	3 bytes
7	X-SUS-D2 adjustment value (XD2)	3 bytes
8	X-SUS-D1 adjustment value (XD1)	3 bytes
9	Y-SUS-U1 adjustment value (YU1)	3 bytes
10	Y-SUS-U2 adjustment value (YU2)	3 bytes
11	Y-SUS-D1-2 adjustment value (YD2)	3 bytes
12	Y-SUS-D1-1 adjustment value (YD1)	3 bytes
13	Y-SUS-D2-2 adjustment value (YD4)	3 bytes
14	Y-SUS-D2-1 adjustment value (YD3)	3 bytes

Data	Table
AB1	ABL table for NTSC
AB2	ABL table for PAL
AB3	ABL table for PC

GPW: Returning RGB-level-related adjustment values of the PDP

Order	Data	Size
1	Panel W/B table currently used	3 bytes
2	Main contrast	4 bytes
3	Red contrast of the W/B adjustment value	4 bytes
4	Green contrast of the W/B adjustment value	4 bytes
5	Blue contrast of the W/B adjustment value	4 bytes
6	Main brightness	4 bytes
7	Red brightness of the W/B adjustment value	4 bytes
8	Green brightness of the W/B adjustment value	4 bytes
9	Blue brightness of the W/B adjustment value	4 bytes

Data	Table
PT1	ABL table for NTSC
PT2	ABL table for PAL
PT3	Reserved table

GS6: Returning information of the Flash Device

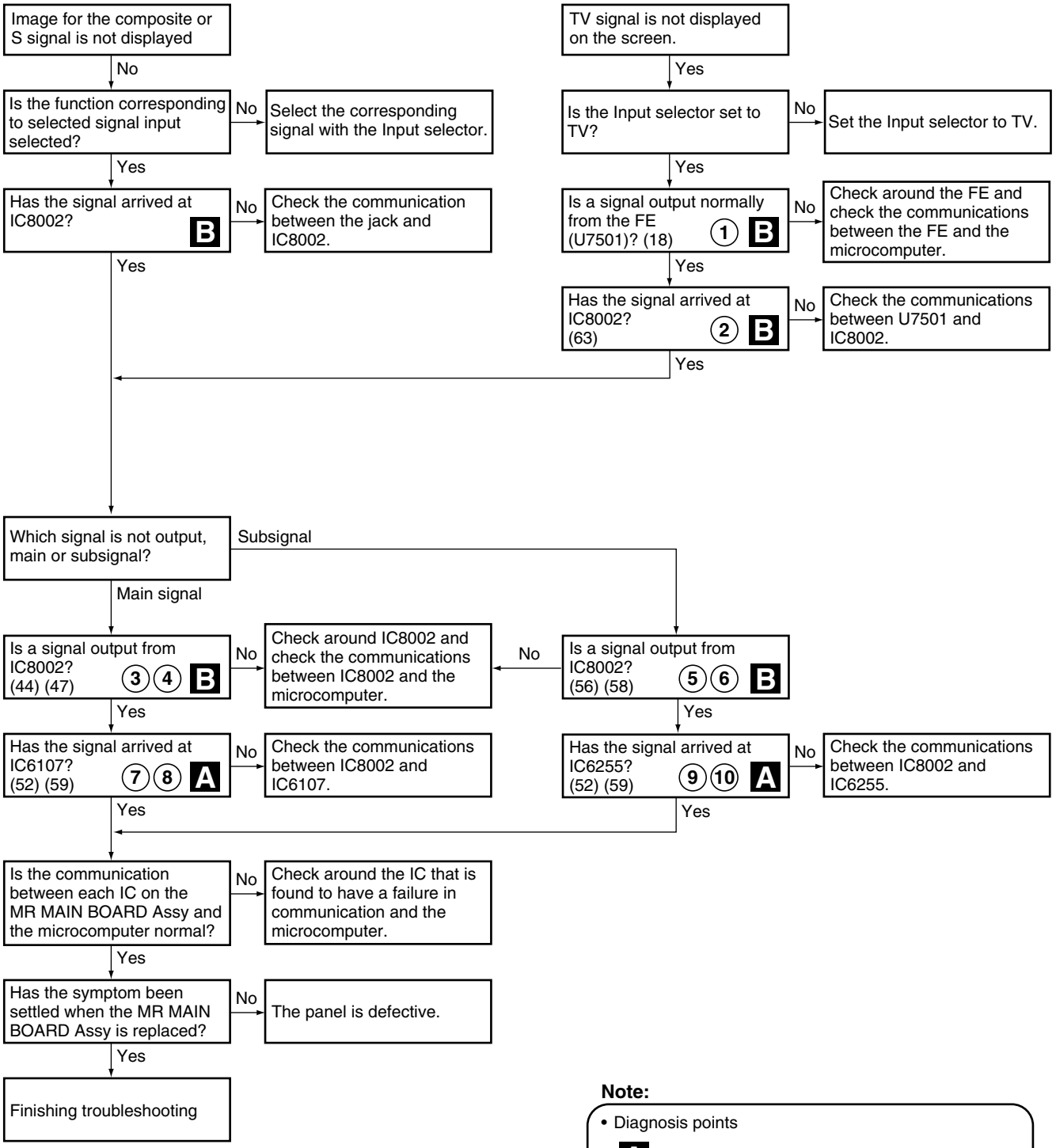
Order	Data	Size
1	Display Information	3 bytes
2	Version of the CCD UCOM	4 bytes
3	Version of the DTV Software	4 bytes
4	Version of the DTV Hardtware	2 bytes
5	Version of the DTV Hardtware Serial	6bytes
6	Not Used (Reserve)	56 bytes
7	User Password	4 bytes

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 TROUBLESHOOTING

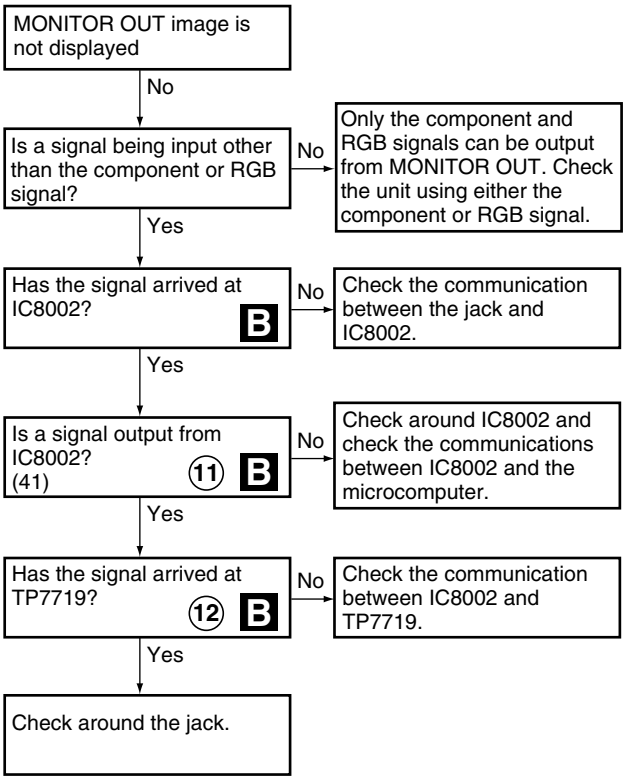
● Image for the composite or S signal is not displayed



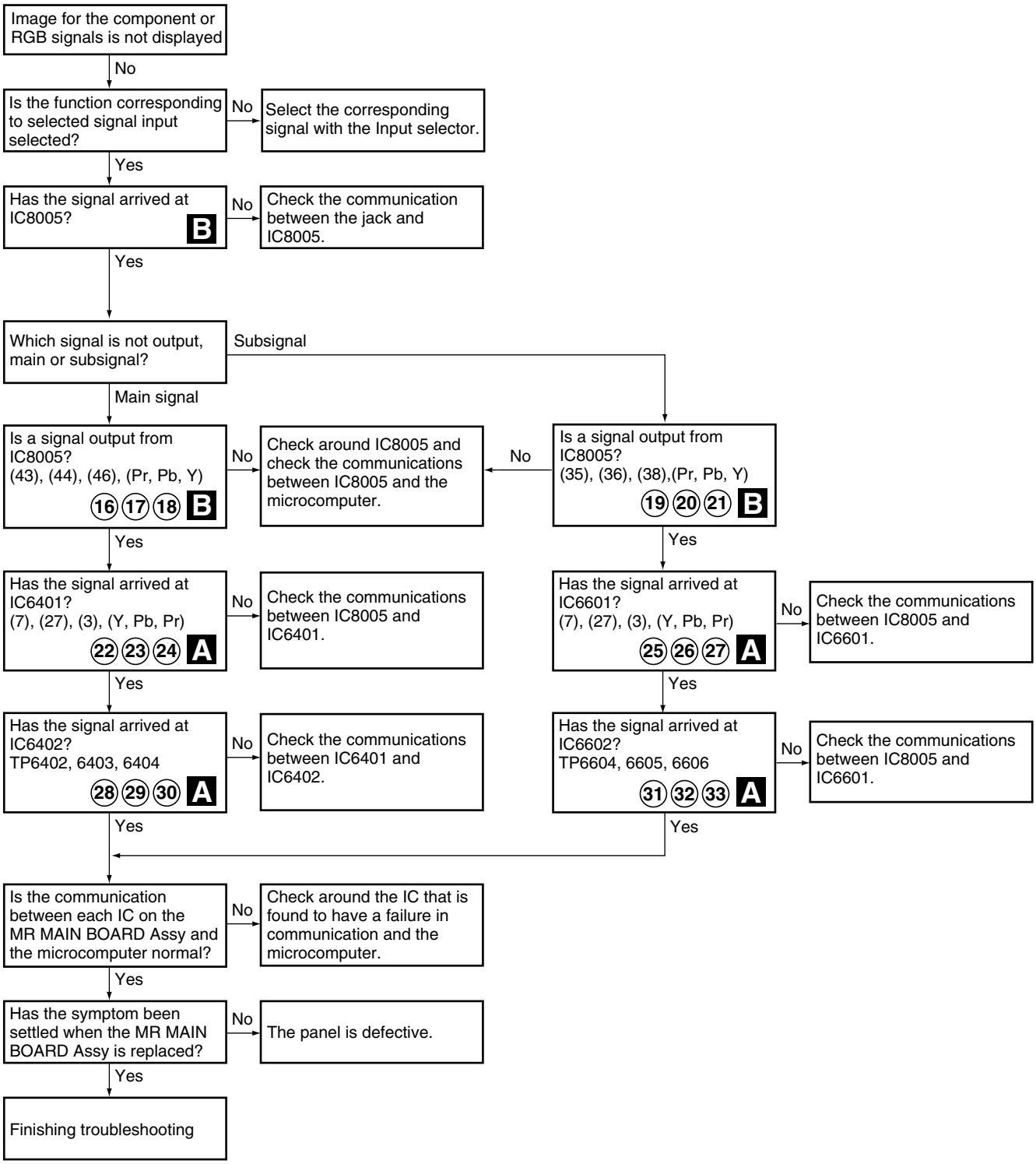
Note:

- Diagnosis points
  - **A MR MAIN BOARD ASSY**
  - **B AV BOARD ASSY**
- For check the communication with the microcomputer, refer to the section 6.7 SERVICE FACTORY MODE.
- The encircled numbers denote measuring point in the Waveforms for Troubleshooting.

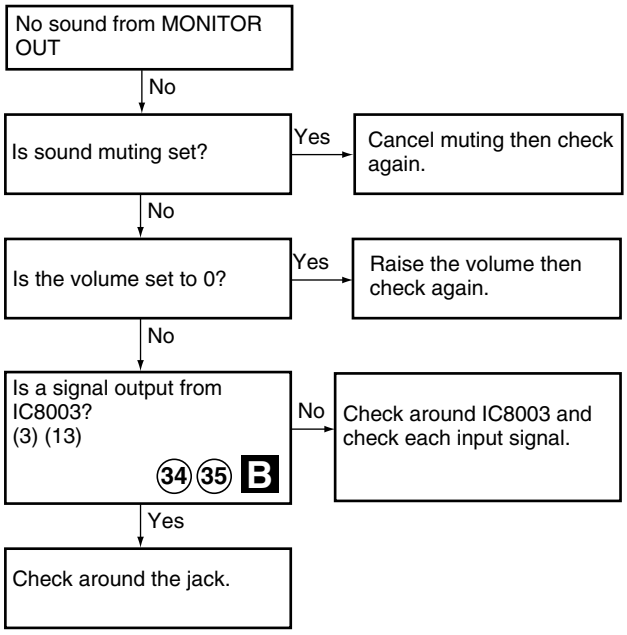
● MONITOR OUT image is not displayed



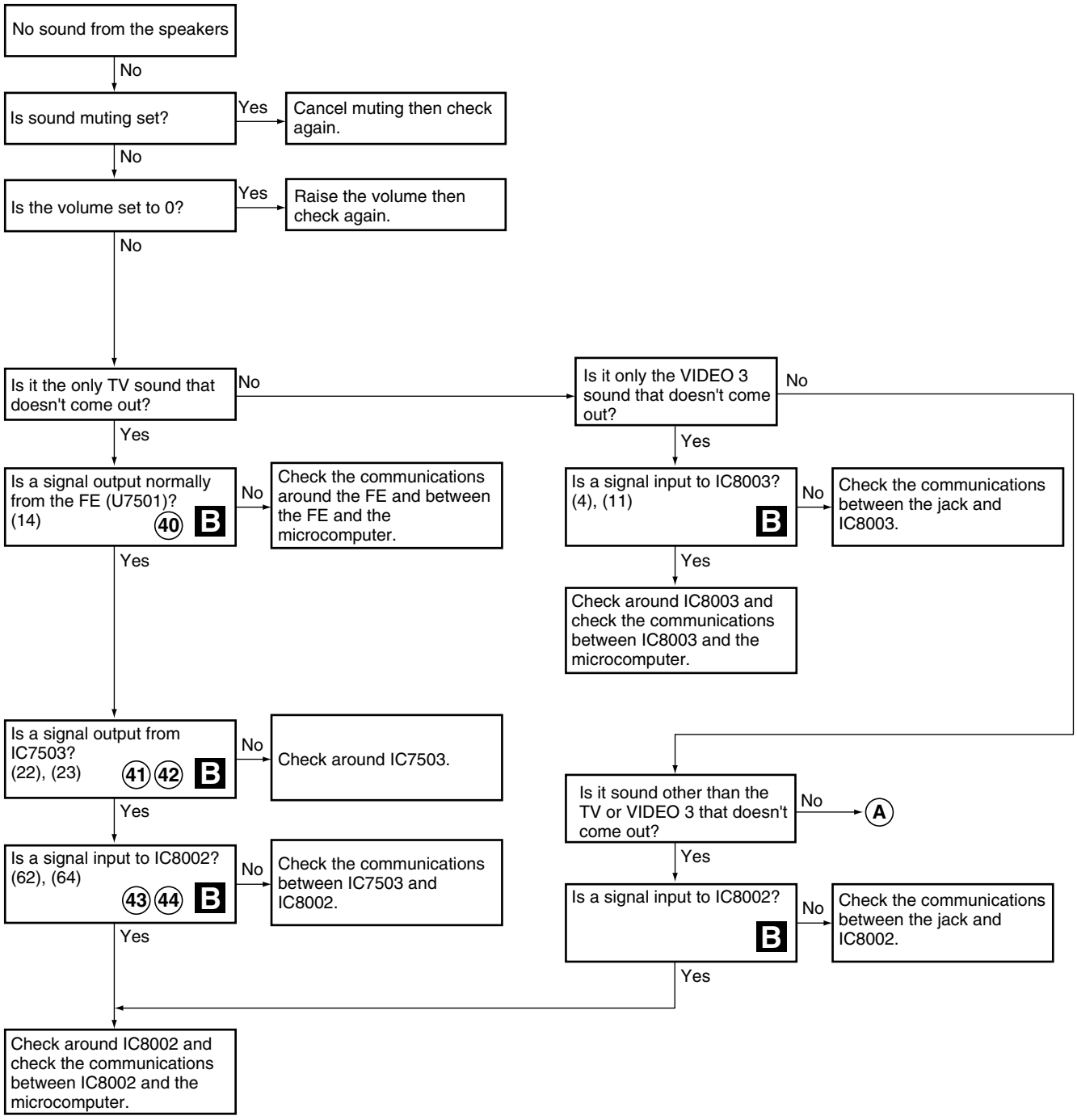
● Image for the component or RGB signals is not displayed



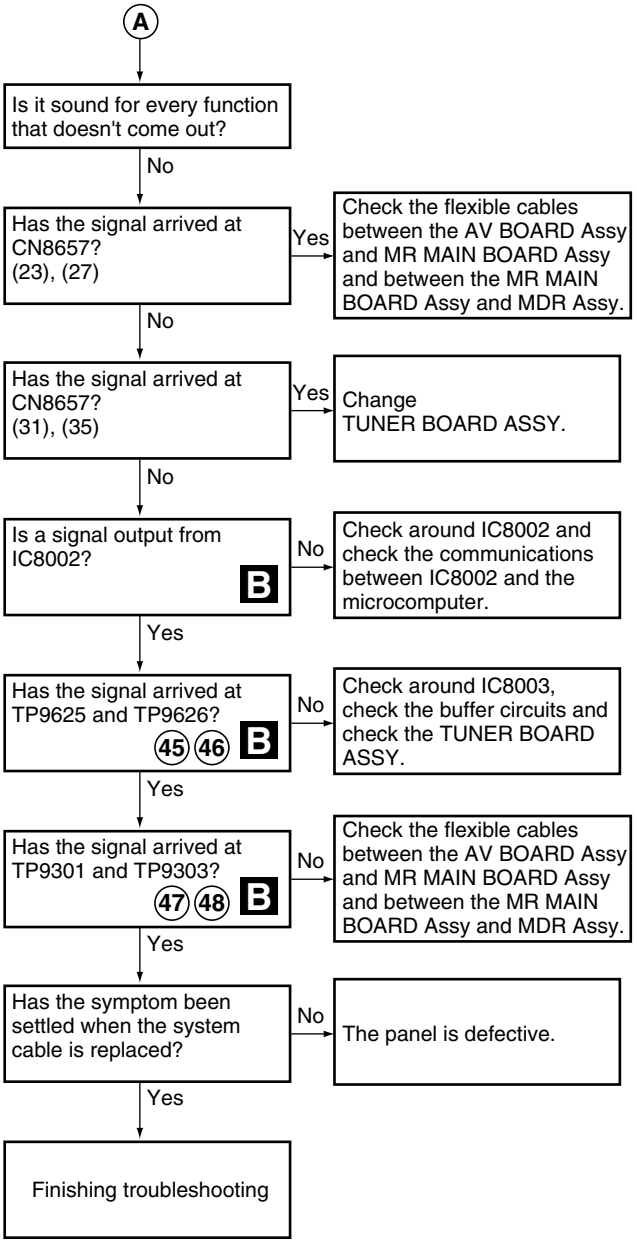
● No sound


No sound from MONITOR OUT
No
Is sound muting set?
Yes
Cancel muting then check again.
No
Is the volume set to 0?
Yes
Raise the volume then check again.
No
Is a signal output from IC8003?
(3) (13)
34 35 B
No
Check around IC8003 and check each input signal.
Yes
Check around the jack.

● No sound from the speakers (1/2)

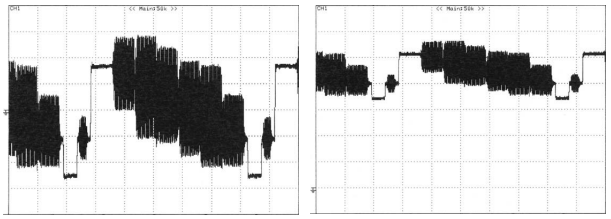


● No sound from the speakers (2/2)



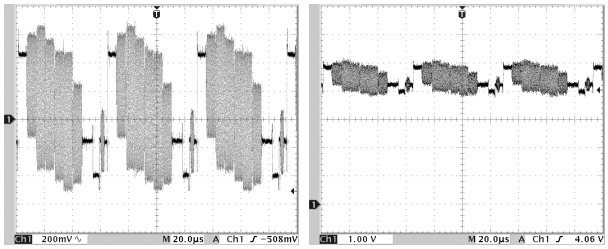
A

1 **U7501 - pin 18**



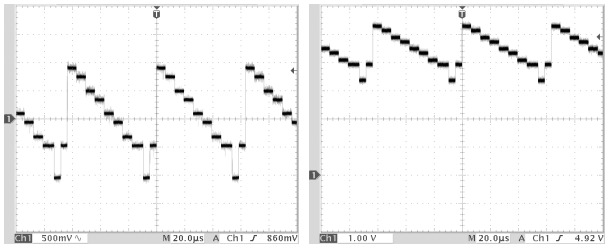
0.2V/div AC 10µs/div 0.5V/div DC 10µs/div

2 **IC8002 - pin 63**



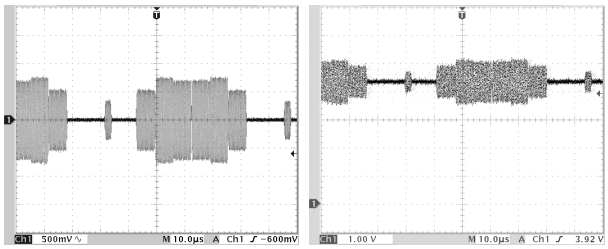
B

3 **IC8002 - pin 44**



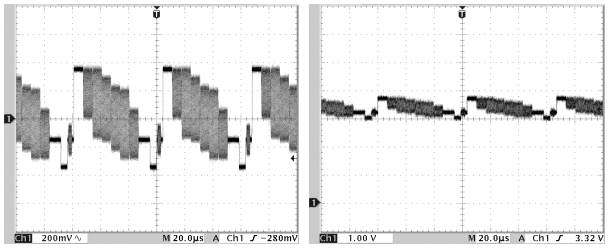
C

4 **IC8002 - pin 47**



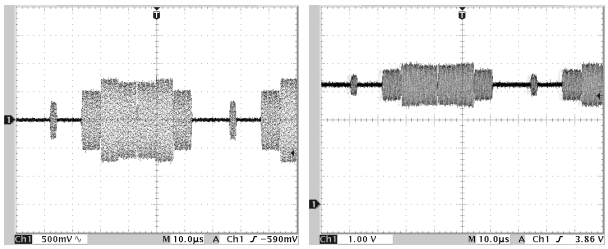
D

5 **IC8002 - pin 56**



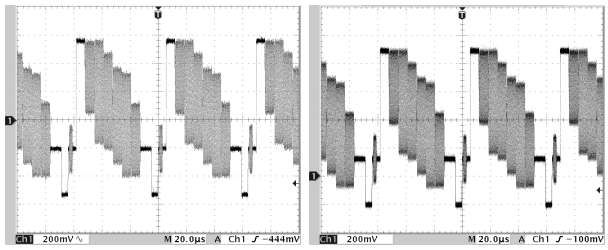
E

6 **IC8002 - pin 58**

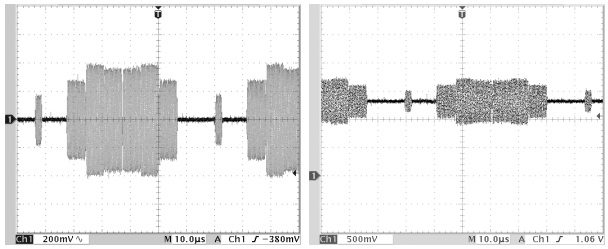


F

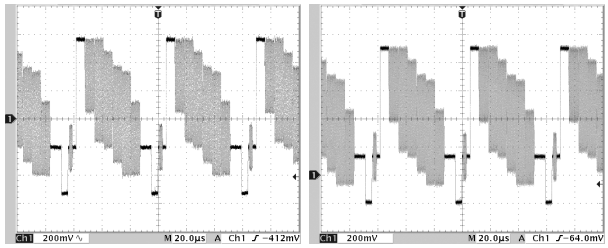
7 **IC6107 - pin 52**



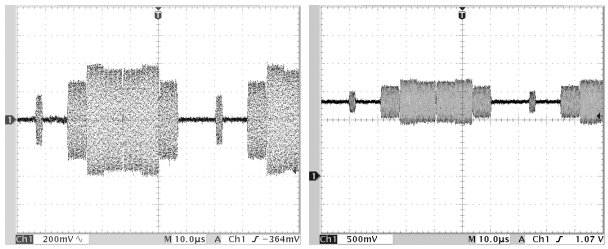
8 **IC6107 - pin 59**



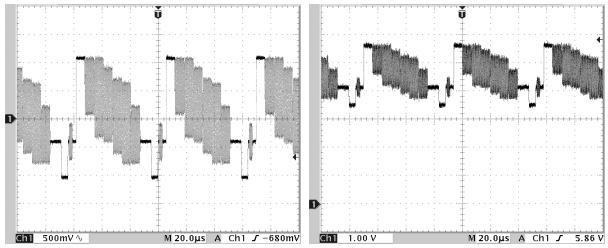
9 **IC6255 - pin 52**



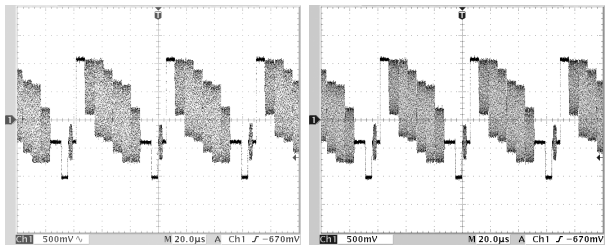
10 **IC6255 - pin 59**



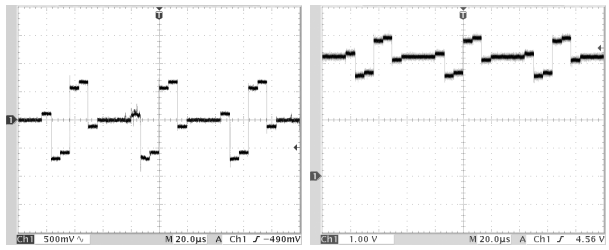
11 **IC8002 - pin 41**



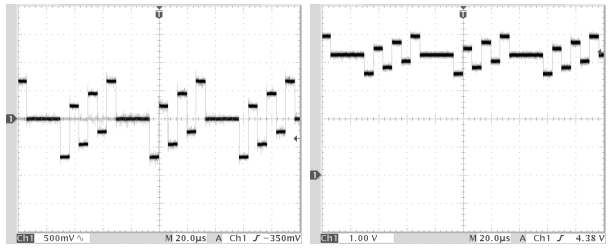
12 **TP7719**



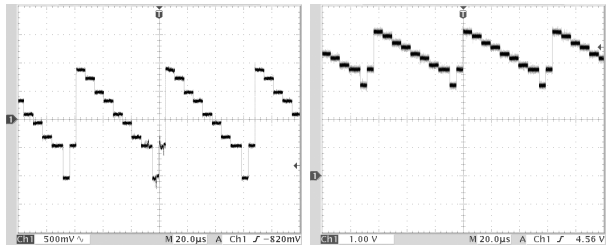
(19) IC8005 - pin 35



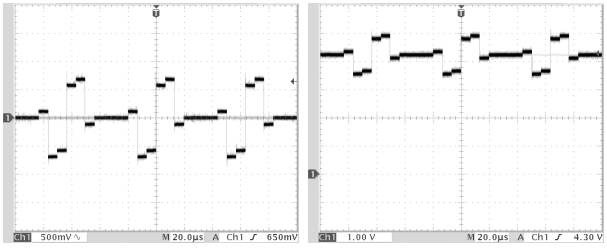
(20) IC8005 - pin 36



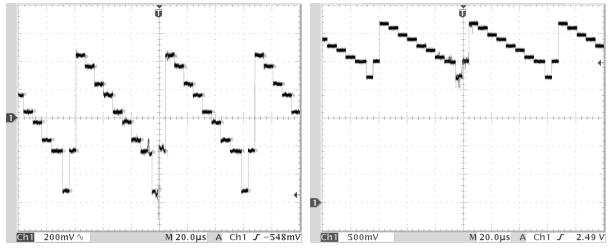
(21) IC8005 - pin 38



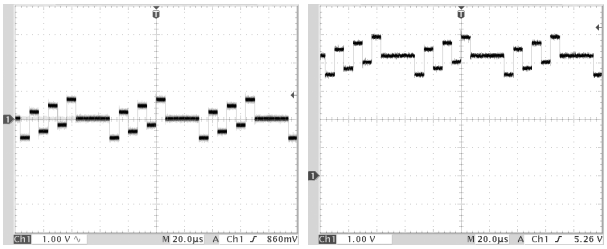
(16) IC8005 - pin 43



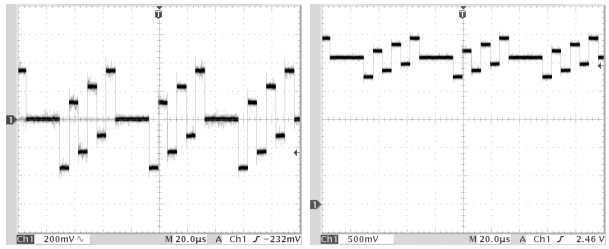
(22) IC6401 - pin 7



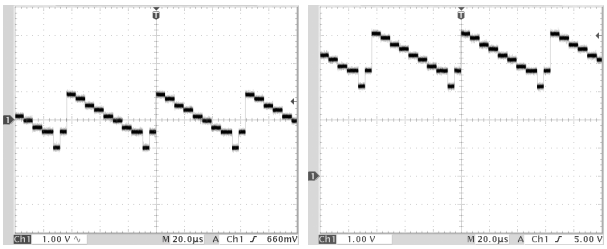
(17) IC8005 - pin 44



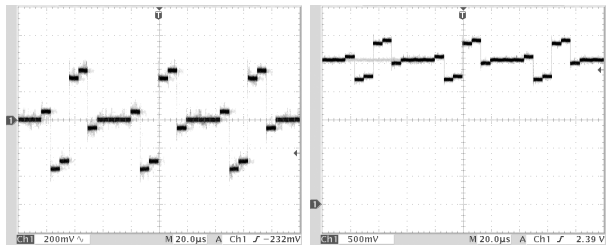
(23) IC6401 - pin 27



(18) IC8005 - pin 46

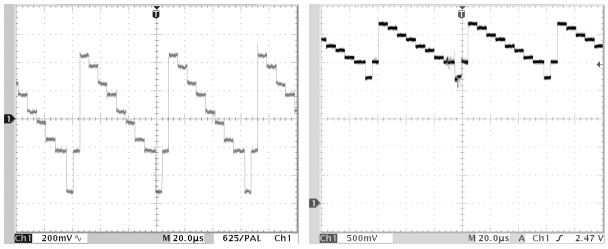


(24) IC6401 - pin 3



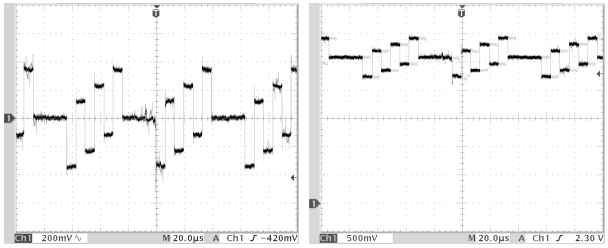
A

25 **IC6601 - pin 7**



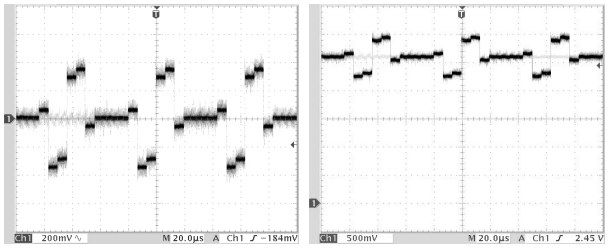
B

26 **IC6601 - pin 27**



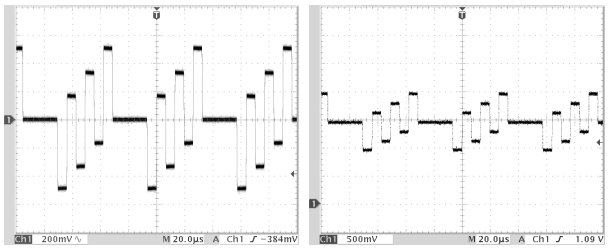
C

27 **IC6601 - pin 3**



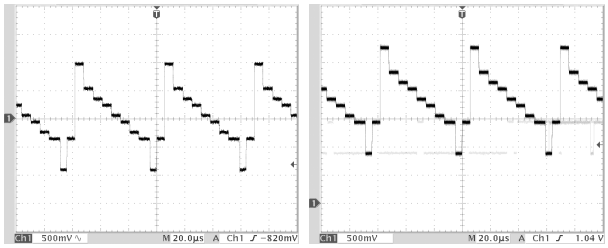
D

28 **TP6402**



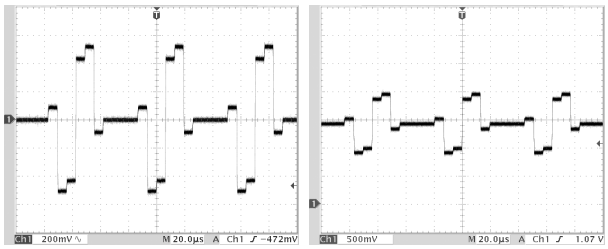
E

29 **TP6403**

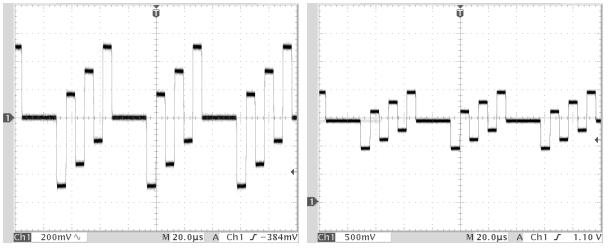


F

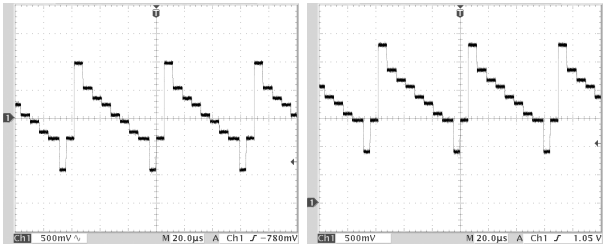
30 **TP6404**



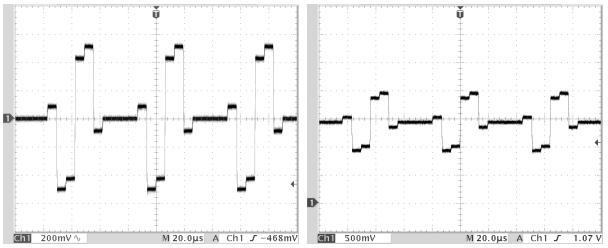
31 **TP6604**



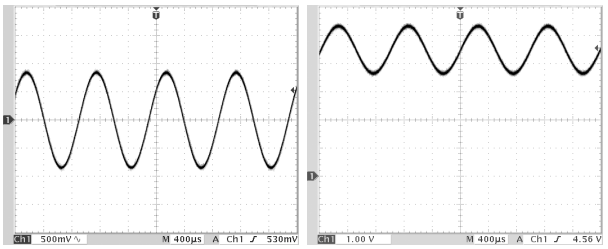
32 **TP6605**



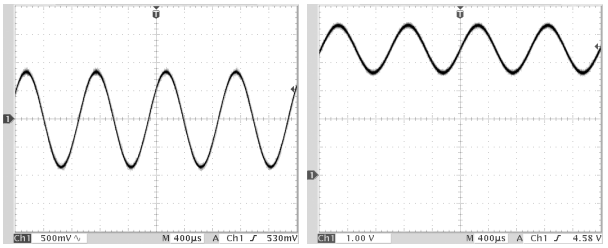
33 **TP6606**



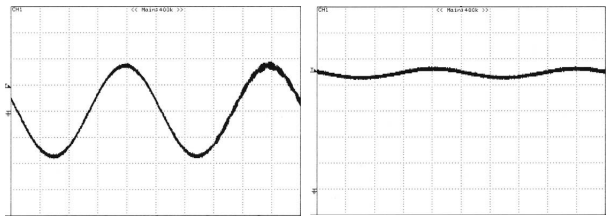
34 **IC8003 - pin 3**



35 **IC8003 - pin 13**

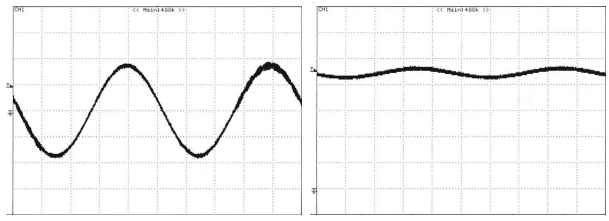


(43) IC8002 - pin 62



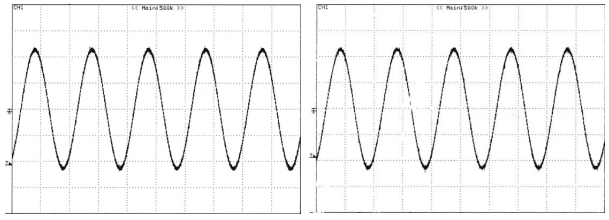
0.1V/div AC 200µs/div 1V/div DC 200µs/div

(44) IC8002 - pin 64



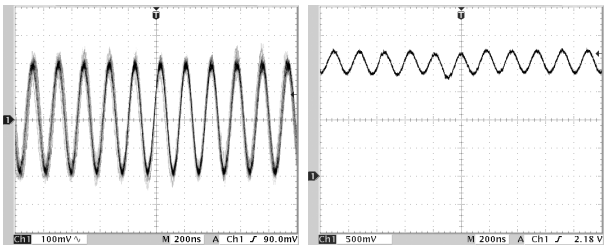
0.1V/div AC 200µs/div 1V/div DC 200µs/div

(45) TP9625

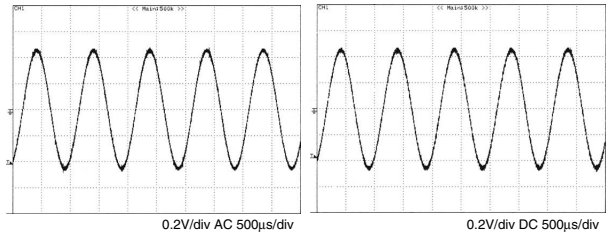


0.2V/div AC 500µs/div 0.2V/div DC 500µs/div

(40) U7501 - pin 14

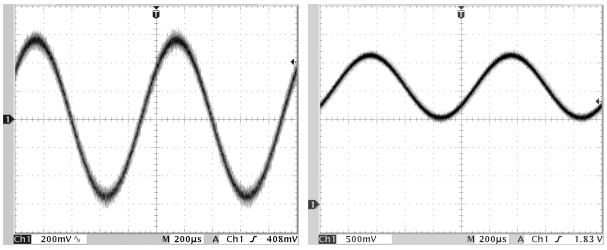


(46) TP9626

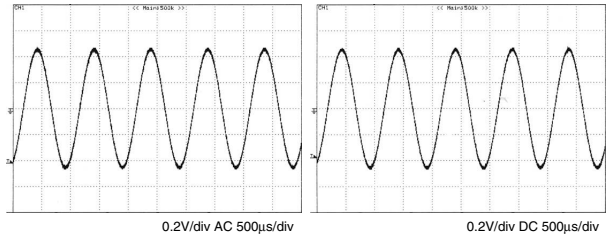


0.2V/div AC 500µs/div 0.2V/div DC 500µs/div

(41) IC7503 - pin 22

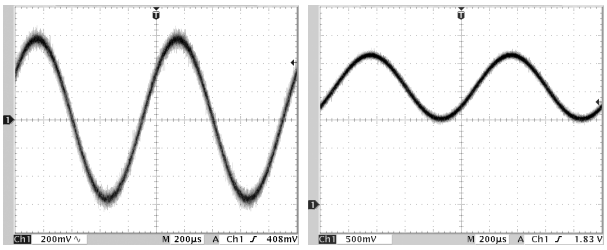


(47) TP9301

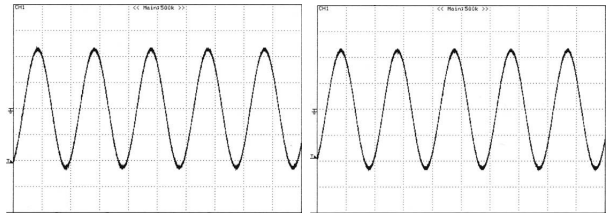


0.2V/div AC 500µs/div 0.2V/div DC 500µs/div

(42) IC7503 - pin 23



(48) TP9303



0.2V/div AC 500µs/div 0.2V/div DC 500µs/div

7.1.2 DISASSEMBLY

Note: Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

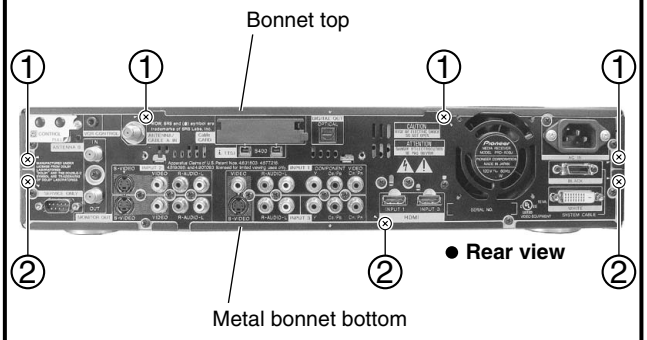
1 Bonnet top and metal bonnet bottom

① Remove the bonnet top by removing the eight screws.

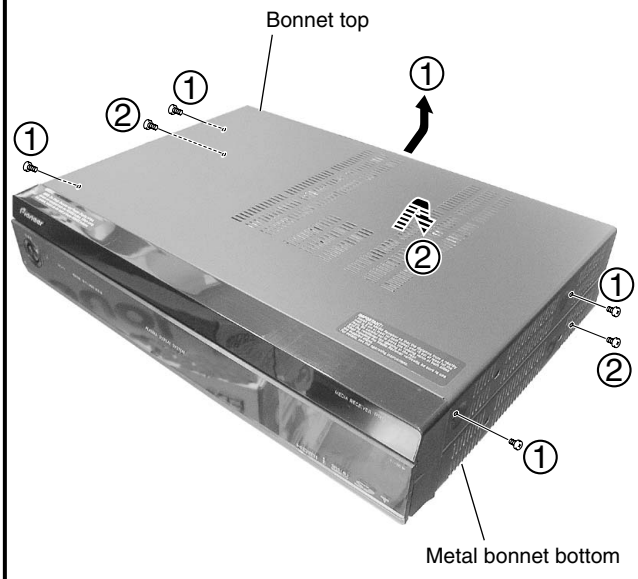
② Remove the metal bonnet bottom by removing the five screws.

Caution :

Please remove it after pulling it in a rear direction because bonnet top and metal bonnet bottom are hard to reduce.



● **Rear view**



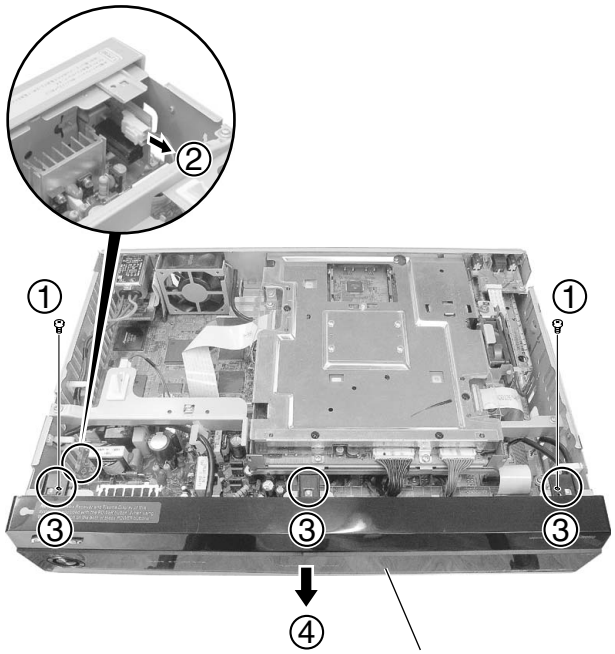
2 Front panel section

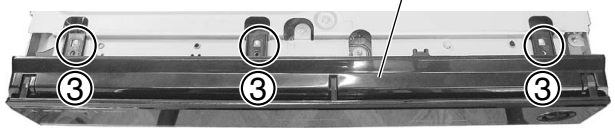
① Remove the two screws.

② Disconnect the one connector.

③ Unhook the six hooks.

④ Remove the front panel section.

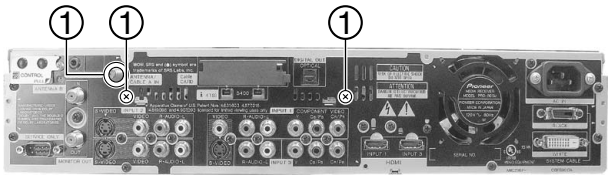




● **Bottom view**

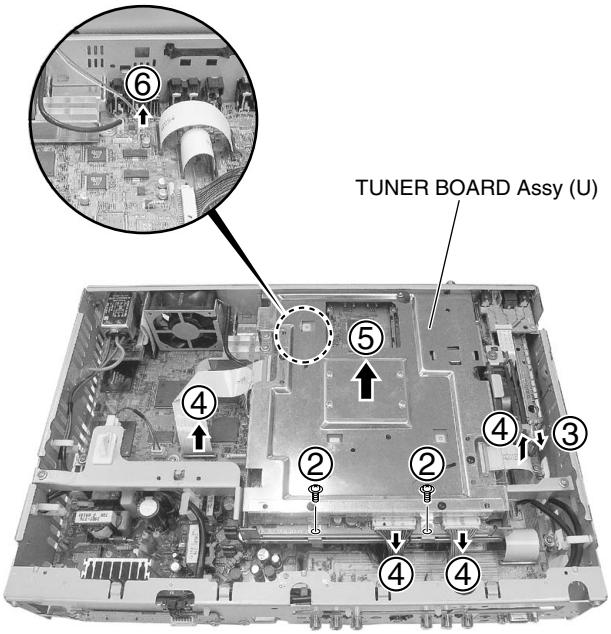
3 TUNER BOARD Assy (U)

① Remove the one washer and two screws.

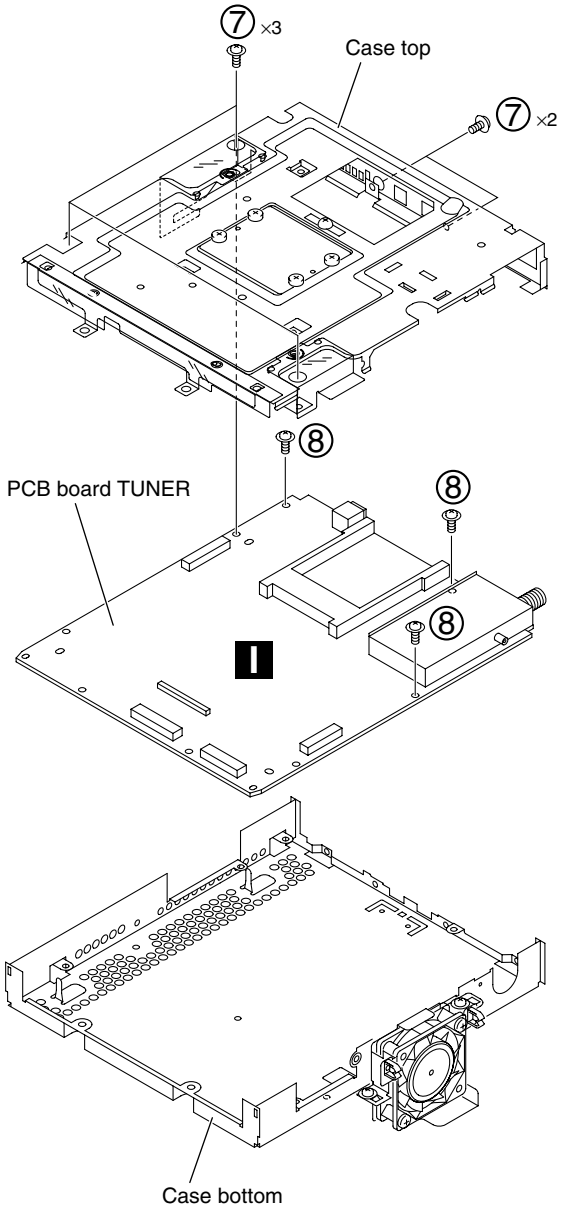


● **Rear view**

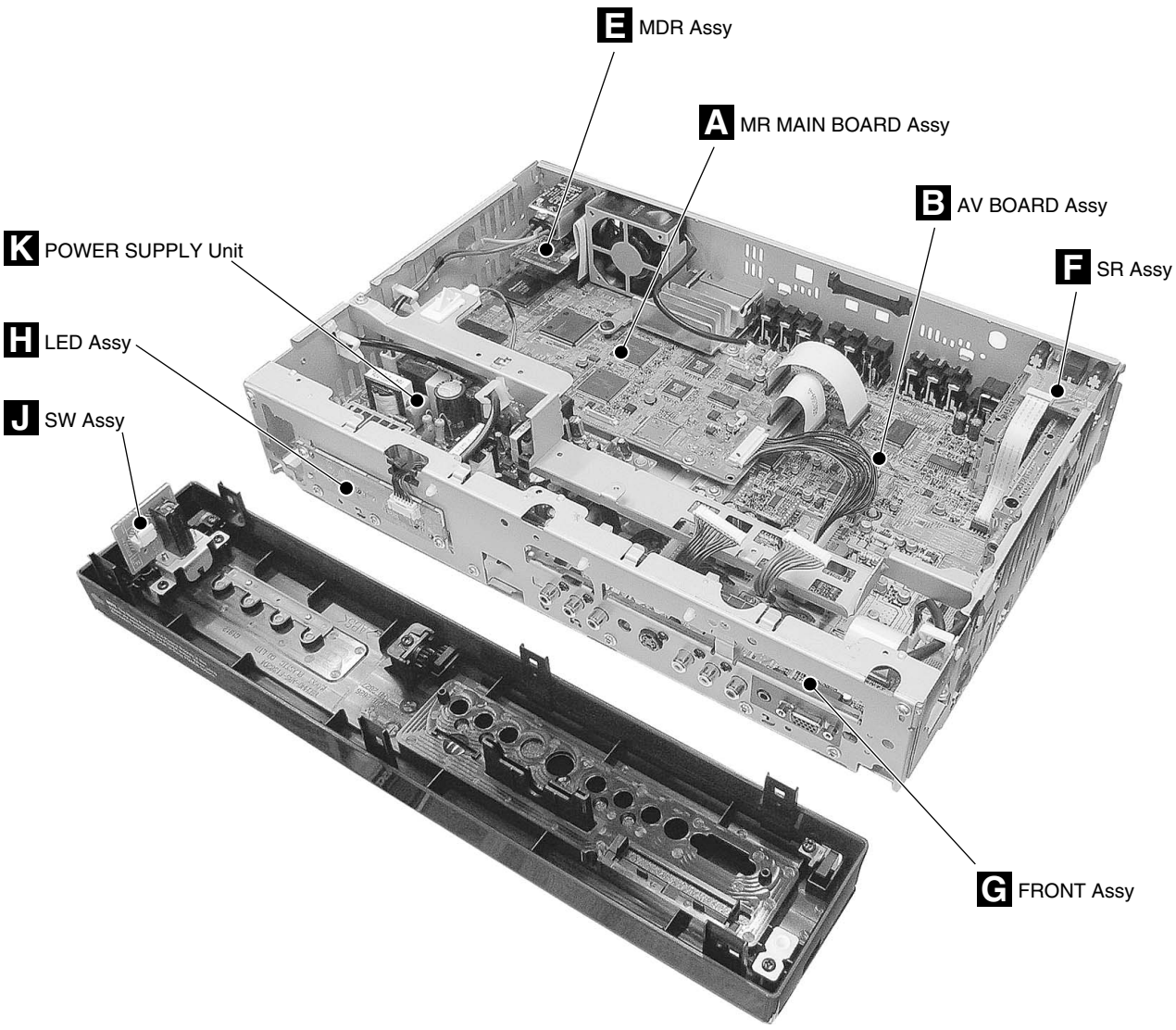
② Remove the two screws.
③ Disconnect the one plug cord.
④ Disconnect the two flexible cables and two connectors.
⑤ Remove the TUNER BOARD Assy (U).
⑥ Disconnect the one connector.



⑦ Remove the five screws.
⑧ Remove the three screws.



PCB Location

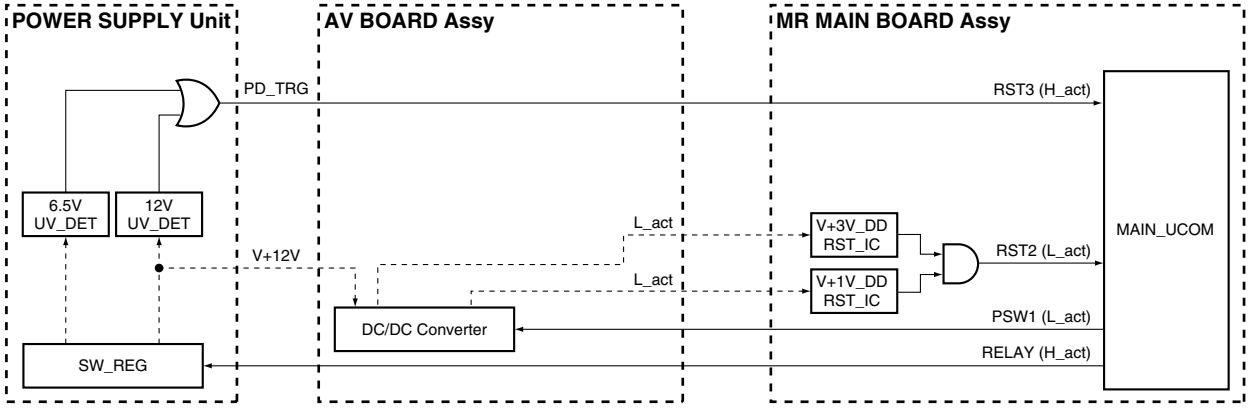


7.2 EXPLANATION

7.2.1 PROCESSING IN ABNORMALITY

Power supply and DC-DC converter

● **Circuit diagram**

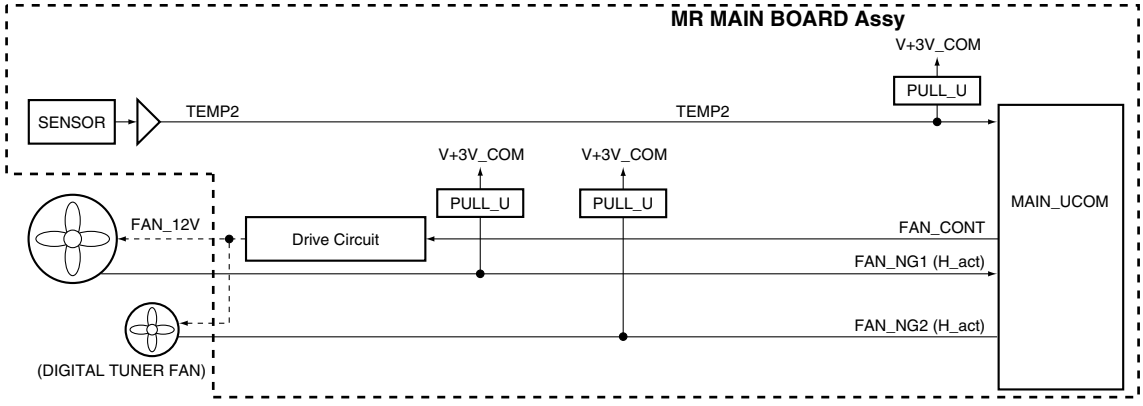


● **Specifications for port monitoring**

Port Name	SD/PD Indication	Assigned Pin	Active
PD_MAIN (PD_TRG)	MR_PWR	41	Power-down with H
RST2	ASIC power supply	98	Shutdown with L

Fan and temperature sensor

● **Circuit diagram**

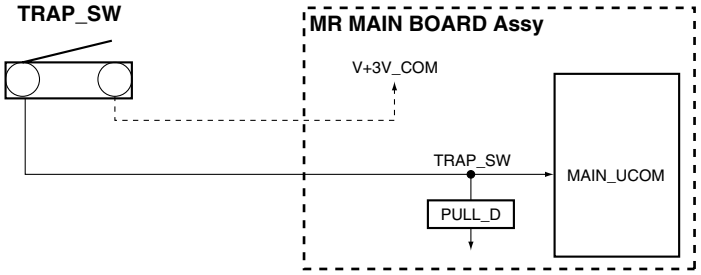


● **Specifications for port monitoring**

Port Name	SD/PD Indication	Assigned Pin	Active
FAN_NG 1	FAN	31	Shutdown with H
FAN_NG 2	FAN	32	Shutdown with H
TEMP2	Abnormally high temperature in the MR	50	Shutdown when the value exceeds the predetermined value

TRAP_SW

● Circuit diagram

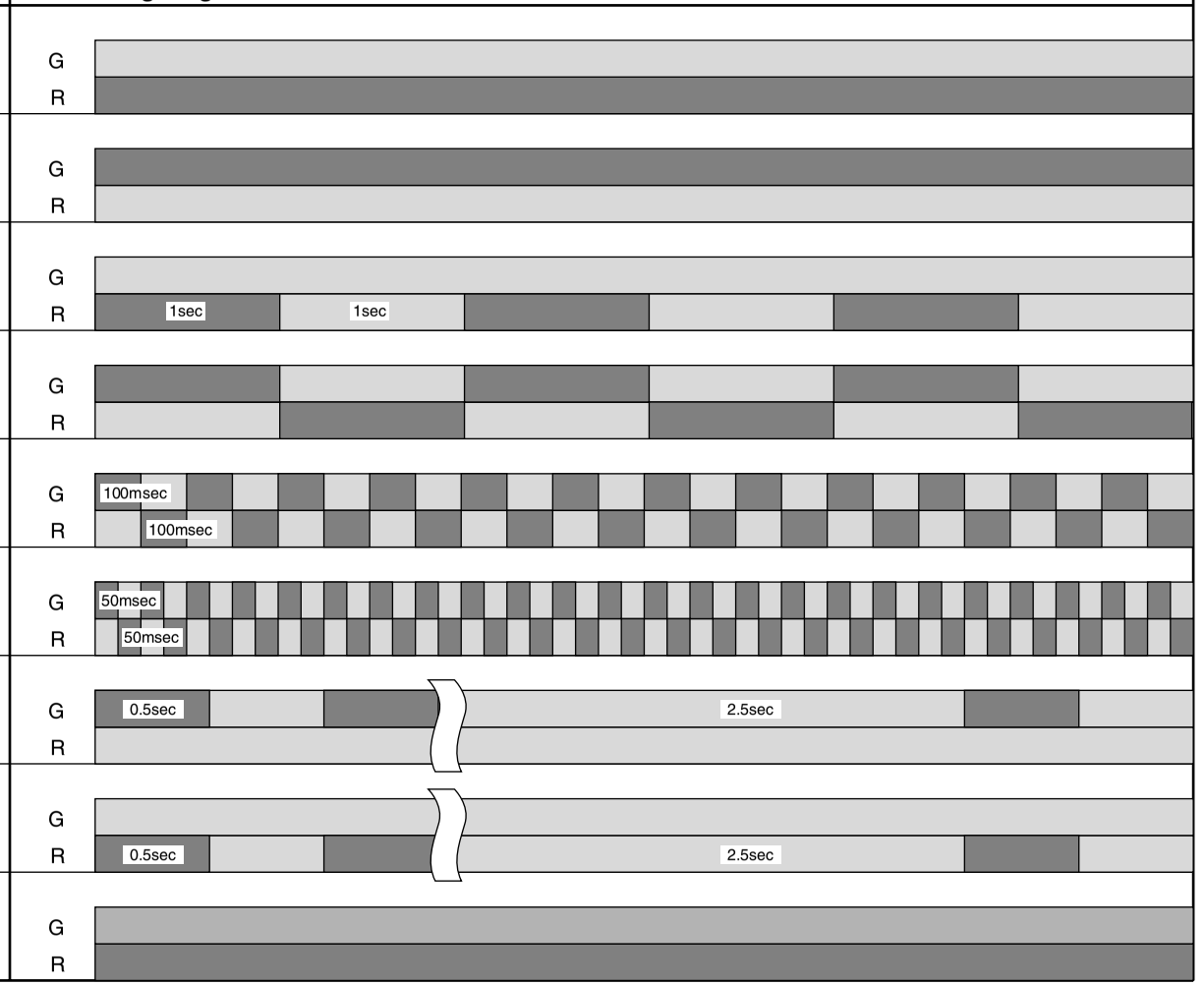


● Specifications for port monitoring

Port Name	SD/PD Indication	Assigned Pin	Active
TRAP_SW	Modification tried	30	OFF with L

LED-lighting patterns

Status of the Unit		LED-lighting Pattern
Standby, power management	Lit in red	
Power on	Lit in green	
PDP's power not on	Flashing in red (at 1-sec intervals)	
System cable disconnected *	Flashing alternately in red and green (at 1-sec intervals)	
Waiting for start of rewriting by the microcomputer		
Waiting for finish of rewriting by the microcomputer		
Shutdown (circuit protection)	Flashing in green n times (initially at 0.5-sec intervals then 2.5-sec intervals)	
Power-down (circuit protection)	Flashing in red for n times (initially at 0.5-sec intervals then 2.5-sec intervals)	
TRAP switch operation		



* In this case, the red and green areas on the screen of the panel flash alternately.

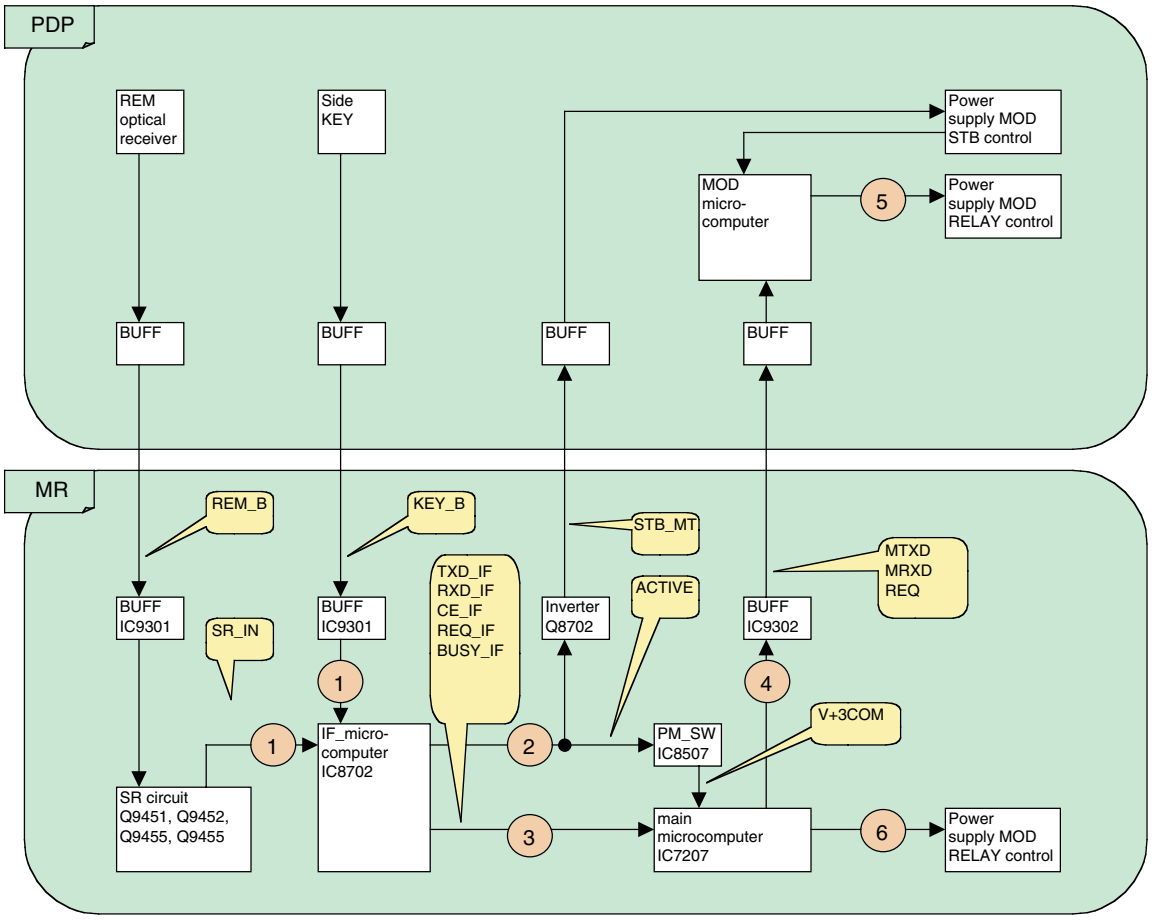
■ Defective points assumed from the number of times of LED flashing

No. of times of LED flashing				Category *1	Site detected as defective	Possible defective points (representative examples)	OSD when detected (warning message)
LEDs on the panel		LEDs on the MR					
RED	GRN	RED	GRN				
	Green 1	Red		SD	Panel drive IC	*2	None
	Green 2	Red			Module section IIC	*2	None
	Green 3	Red			Power decrease of DIGITAL-DC-DC	*2	None
	Green 4	Red			Panel having abnormally high temperature	*2	The power is shut down, because the internal temperature has risen. Check the temperature surrounding the PDP. (SD04)
	Green 5	Red			Short-circuiting of the speakers	*2	The power is shut down, because the protection circuit inside the unit is activated. Check if the speaker cables are short-circuited. (SD05)
Red			Green 6		Module microcomputer	Disconnection of the system cable Defective module microcomputer or its peripheral circuits of the panel (Refer to the service manual of the PDP-434PU or PDP-504PU.) Defective main microcomputer (IC7207) Failure in communication (TXD_MD, RXD_MD, REQ_MD) between the panel's module microcomputer and IC7207 (main microcomputer)	None
Red			Green 7		3-wire serial connection of the main section	Defective IC7004 or its peripheral circuits Failure in communication (TXD_IC, XD_IC2, CLK_IC2, IC2_CE, IC2_EMG) between IC7004 and IC7207 (main microcomputer) Defective IC7101 or its peripheral circuits Failure in communication (TXD_IC3, RXD_IC3, CLK_IC3, IC3_CE, IC3_REQ, IC3_BUSY) between IC7101 and IC7207 (main microcomputer)	None
Red			Green 8		IIC of the main section	Defective IC6107 (CD_MAIN) or its peripheral circuits Defective IC6255 (CD_SUB) or its peripheral circuits Defective IC6402 (AD_MAIN) or its peripheral circuits Defective IC6602 (AD_SUB) or its peripheral circuits Defective IC6881 (HDMI_2) or its peripheral circuits Defective IC6951 (BUS_SW) or its peripheral circuits Defective IC7401 (TX) or its peripheral circuits Defective U7501 (TU) or its peripheral circuits Defective U7502 (TU) or its peripheral circuits Defective IC8002 (AV_SW) or its peripheral circuits Defective IC8005 (RGB_SW) or its peripheral circuits Defective IC7205 (E2P) or its peripheral circuits Failure in communication (SCL_AV, SDA_AV, SCL_MAIN, SDA_MAIN, SCL_HDMI, SDA_HDMI, SCL_EP, SDA_EP) between one of the above devices and IC7207 (main microcomputer)	None
Red			Green 9		Main microcomputer	Defective IC7207 (main microcomputer) Defective flexible cable for communication between the MR MAIN BOARD Assy and the AV BOARD Assy Failure in communication (TXD_IF, RXD_IF, CLK_IF, IF_CE, IF_BUSY) between IC7207 (main microcomputer) and IC8702	None
Red			Green 10		Fan	Failure in the fan motor, or the fan stopped because of dust attached to the fan	None
Red			Green 11		MR or unit having abnormally high temperature	The Media Receiver or the unit being used at high temperature	The power is shut down, because the internal temperature has risen. Check the temperature surrounding the Media Receiver. (SD11)
Red			Green 12		Digital tuner (U.S. model)	Defective DTV tuner Failure in communication (TXD_DT, RXD_DT) between the digital tuner and IC8202 (main microcomputer)	None
Red			Green 13		ASIC power supply (DC-DC)	Defective U8502 (DD_CON) or short-circuiting elsewhere	None
Red			Green 14		IF_E2P	Defective IC8705 (IF_E2P) or its peripheral circuits	None
Red		Red 1		PD	MR PWR	Defective Power Supply Assy of the Media Receiver, or power short-circuiting in another Assy	None
Red 2		Red			POWER	*2	None
Red 3		Red			SCAN	*2	None
Red 4		Red			SCN-5V	*2	None
Red 5		Red			Y-DRIVE	*2	None
Red 6		Red			Y-DCDC	*2	None
Red 7		Red			Y-SUS	*2	None
Red 8		Red			ADRS	*2	None
Red 9		Red			X-DRIVE	*2	None
Red 10		Red			X-DCDC	*2	None
Red 11		Red			X-SUS	*2	None
Red 12		Red			D-DCDC	*2	None
Red 13		Red			IC4	*2	None

*1: Shutdown (SD) is a protective operation controlled by the microcomputer, and you can turn on the unit again using the remote control unit. Power-down (PD) is a protective operation activated by the circuitry and can be reset after AC power is off for about 1 minute.
*2: Refer to the service manual of the PDP-435PU or PDP-505PU.

7.2.2 SEQUENCE

R05 series Power-on sequence



REM_B Comment in the balloon is the reference signal name.
Please confirm the wiring number of PDP side with the service manual of PDP side.

① : Remote controller signal (or, KEY signal) is input into IF microcomputer.
② : IF microcomputer supplies the power supply to Main microcomputer and MOD microcomputer.
③ : IF microcomputer communicates the operation information of Remote controller (or KEY) to Main microcomputer.
④ : Main microcomputer sends in the activation order to MOD microcomputer.
⑤ : MOD microcomputer controls the relay of PDP power supply MOD, and activate the power supply of PDP side.
⑥ : Main microcomputer controls the relay of MR power supply MOD, and activate the power supply of MR side.

7.3 PARTS
7.3.1 IC

¥ The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

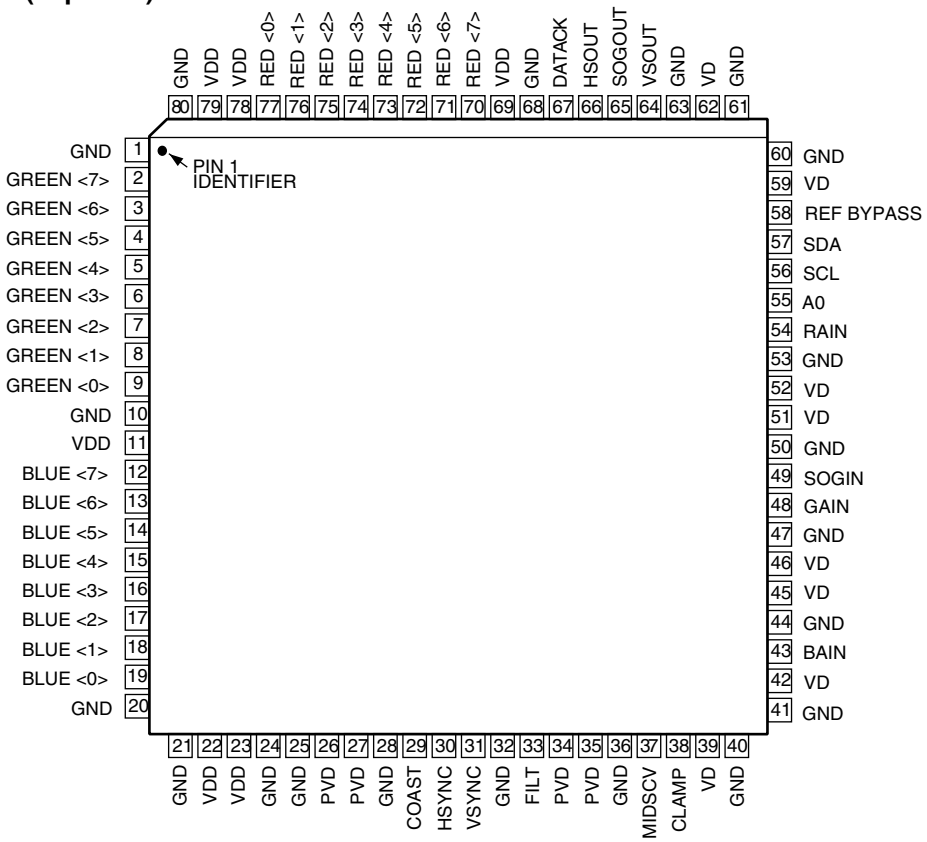
● **List of IC**

AD80058-K, SM5301BS, BA7078AF, SII9993CTG100, HY57V643220CT-7 (or K4S643232H-TC60-K), MBM29PL3200BE70PFV, SII170BCLG64, HY57V161610DTC-8 (or K4S161622H-TC60-K), TA1287FG, AXY1088, AXY1089, CXA2069Q

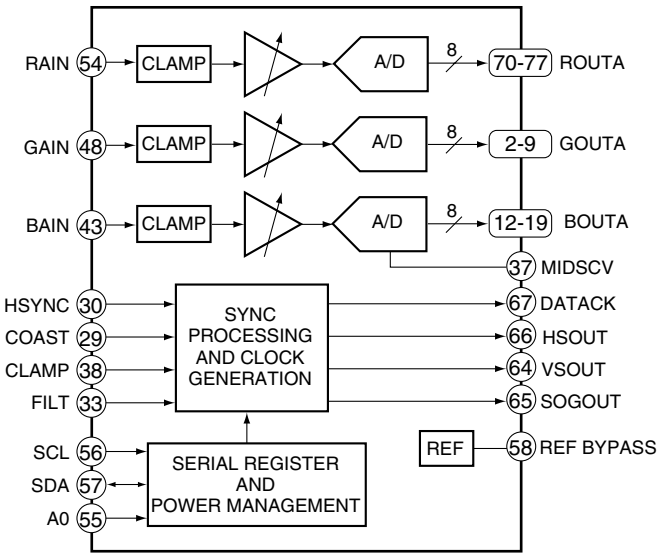
■ AD80058-K (MR MAIN BOARD ASSY : IC6402, IC6602)

• 110 MSPS Analog Interface

● **Pin Arrangement (Top view)**



● **Block Diagram**



● **Pin Function**

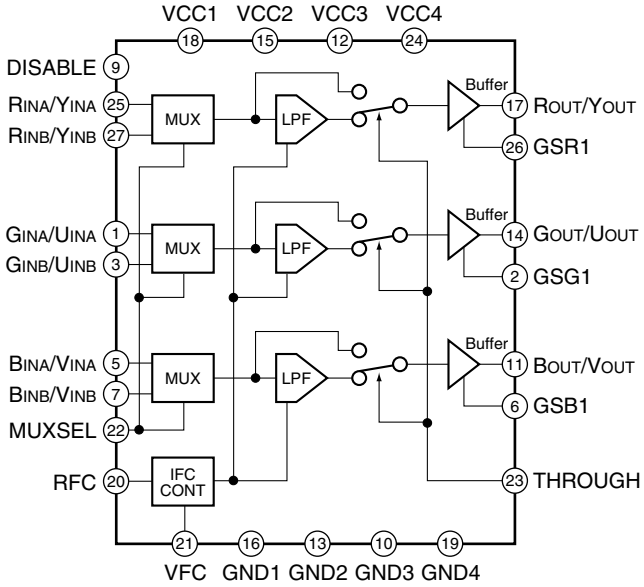
No.	Pin Name	I/O	Pin Function
1	GND	–	Ground
2	GREEN 7	O	Converter Green output (MSB)
3	GREEN 6	O	Converter Green output
4	GREEN 5	O	Converter Green output
5	GREEN 4	O	Converter Green output
6	GREEN 3	O	Converter Green output
7	GREEN 2	O	Converter Green output
8	GREEN 1	O	Converter Green output
9	GREEN 0	O	Converter Green output
10	GND	–	Ground
11	VDD	–	Power supply (3.3V)
12	BLUE 7	O	Converter Blue output (MSB)
13	BLUE 6	O	Converter Blue output
14	BLUE 5	O	Converter Blue output
15	BLUE 4	O	Converter Blue output
16	BLUE 3	O	Converter Blue output
17	BLUE 2	O	Converter Blue output
18	BLUE 1	O	Converter Blue output
19	BLUE 0	O	Converter Blue output
20	GND	–	Ground
21	GND	–	Ground
22	VDD	–	Power supply (3.3V)
23	VDD	–	Power supply (3.3V)
24	GND	–	Ground
25	GND	–	Ground
26	PVD	–	PLL power supply (3.3V)
27	PVD	–	PLL power supply (3.3V)
28	GND	–	Ground
29	COAST	I	PLL COAST signal input
30	HSYNC	I	Horizontal sync. input
31	VSYNC	I	Vertical sync. input
32	GND	–	Ground
33	FILT	–	External filter connection pin for built-in PLL
34	PVD	–	PLL power supply (3.3V)
35	PVD	–	PLL power supply (3.3V)
36	GND	–	Ground
37	MIDSCV	–	Internal middle scale voltage bias
38	CLAMP	I	Clamp input (External clamp signal)
39	VD	–	Analog power supply (3.3V)
40	GND	–	Ground
41	GND	–	Ground
42	VD	–	Analog power supply (3.3V)
43	BAIN	I	Analog input for converter B
44	GND	–	Ground
45	VD	–	Analog power supply (3.3V)

No.	Pin Name	I/O	Pin Function
46	VD	–	Analog power supply (3.3V)
47	GND	–	Ground
48	GAIN	I	Analog input for converter G
49	SOGIN	I	Input for Sync-on Green
50	GND	–	Ground
51	VD	–	Analog power supply (3.3V)
52	VD	–	Analog power supply (3.3V)
53	GND	–	Ground
54	RAIN	I	Analog input for converter R
55	A0	I	Address input 1 of serial port
56	SCL	I	Data clock (max. 100kHz) of serial port
57	SDA	I/O	Data input/output of serial port
58	REF BYPASS	–	Internal reference bypass
59	VD	–	Analog power supply (3.3V)
60	GND	–	Ground
61	GND	–	Ground
62	VD	–	Analog power supply (3.3V)
63	GND	–	Ground
64	VSOUT	O	VSYNC output (phasing with DATACLK)
65	SOGOUT	O	Sync-on-Green slicer output
66	HSOUT	O	HSYNC output (phasing with DATACLK)
67	DATACLK	O	Data input/output clock
68	GND	–	Ground
69	VDD	–	Power supply (3.3V)
70	RED 7	O	Converter Red output (MSB)
71	RED 6	O	Converter Red output
72	RED 5	O	Converter Red output
73	RED 4	O	Converter Red output
74	RED 3	O	Converter Red output
75	RED 2	O	Converter Red output
76	RED 1	O	Converter Red output
77	RED 0	O	Converter Red output
78	VDD	–	Power supply (3.3V)
79	VDD	–	Power supply (3.3V)
80	GND	–	Ground

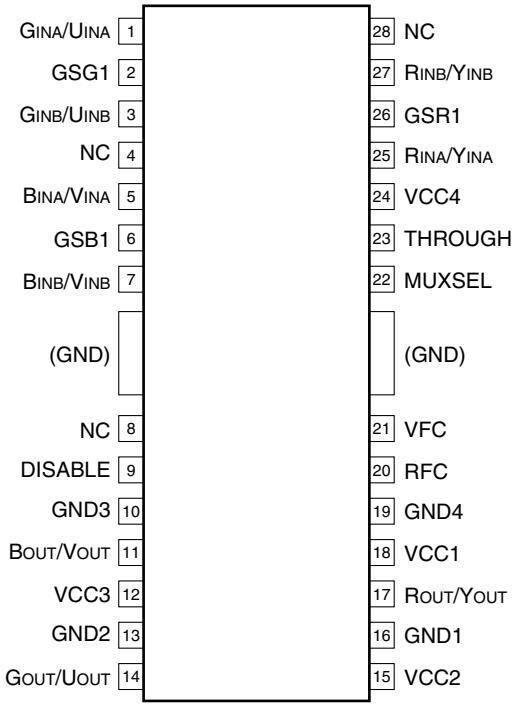
■ SM5301BS (MR MAIN BOARD ASSY : IC6401, IC6601)

• Video Filter

● Block Diagram



● Pin Arrangement (Top view)



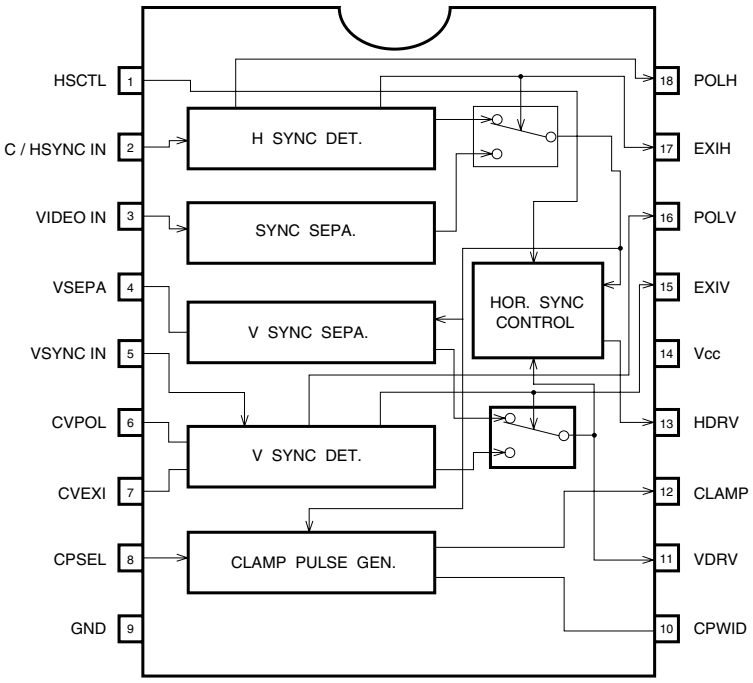
● **Pin Function**

No.	Pin Name	I/O	Pin Function
1	GINA/UINA	I	Analog GINA or UINA signal input. Sync signal is input on SYNCIN pin.
2	GSG1	I	GOUT/UOUT output buffer gain set input
3	GINB/UINB	I	Analog GINB or UINB signal input. Sync signal is input on SYNCIN pin.
4	(NC)	–	No connection
5	BINA/VINA	I	Analog BINA or VINA signal input. Sync signal is input on SYNCIN pin.
6	GSB1	I	BOUT/VOUT output buffer gain set input
7	BINB/VINB	I	Analog BINB or VINB signal input. Sync signal is input on SYNCIN pin.
8	(NC)	–	No connection
9	DISABLE	I	Power save function. Built-in pull-down resistor. L : Enable H : Disable (Output pins: ROUT/YOUT, GOUT/UOUT, and BOUT/VOUT are high impedance.)
10	GND3	–	Analog ground
11	BOUT/VOUT	O	B/V signal output
12	VCC3	–	Analog 5V supply
13	GND2	–	Analog ground
14	GOUT/UOUT	O	G/U signal output
15	VCC2	–	Analog 5V supply
16	GND1	–	Analog ground
17	ROUT/YOUT	O	R/Y signal output
18	VCC1	–	Analog 5V supply
19	GND4	–	Analog ground
20	RFC	–	LPF (lowpass filter) cutoff frequency setting resistor connection
21	VFC	I	LPF (lowpass filter) cutoff frequency setting voltage input
22	MUXSEL	I	Input select signal. Built-in pull-down resistor. L : XINA pin select H : XINB pin select
23	THROUGH	I	Filter through Built-in pull-down resistor. L : Filter function H : Filter through (buffer only)
24	VCC4	–	Analog 5V supply
25	RINA/YINA	I	Analog RINA or YINA signal input. Sync signal is input on SYNCIN pin.
26	GSR1	I	ROUT/YOUT output buffer gain set input
27	RINB/YINB	I	Analog RINB or YINB signal input. Sync signal is input on SYNCIN pin.
28	(NC)	–	No connection

■ BA7078AF (MR MAIN BOARD ASSY : IC6404, IC6604)

• Multi Sync Separation IC

● Block Diagram



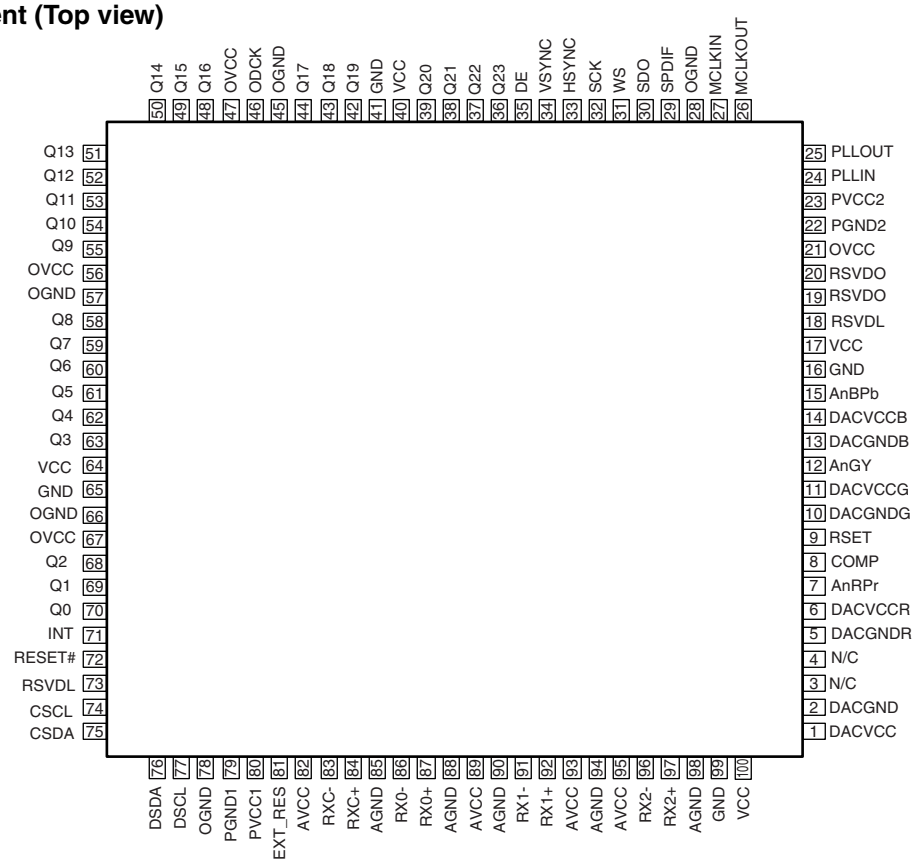
● Pin Function

No.	Pin Name	Pin Function
1	HSCTL	HDRV output Used to select whether to output the VDRV section of the HDRV output signal. High : VDRV section of HDRV is output Low : VDRV section of HDRV is not output
2	C/HSYNC IN	Composite sync / H SYNC input Input either the composite synchronization signal or the horizontal synchronization signal. Input is clamped, and is initiated by capacitor coupling.
3	VIDEO IN	SYNC ON VIDEO input Inputs the SYNC ON VIDEO signal(green). Input is sink chip clamped. Input is initiated by capacitor coupling.
4	VSEPA	f-V conversion Converts the horizontal synchronization signal frequency into a voltage. The voltage generated is proportional to the frequency of the horizontal synchronization signal. Attach a 0.56 μF capacitor between the ground pins.
5	VSYNC IN	V SYNC input Inputs the vertical synchronization signal.
6	CVPOL	Vertical polarity integration Integrates the vertical synchronization signal polarity detection circuit. Attach a 1.5 μF capacitor between this pin and the ground.
7	CVEXI	Vertical existence integration Integrates the vertical synchronization signal existence detection circuit. Attach a 1 μF capacitor between this pin and the ground.
8	CPSEL	Setting the clamp position Used to set the clamp pulse generation position to either the front or back edge of HSYNC High : The front edge is the generation position Open : Composite / H SYNC IN : The front edge is the generation position VIDEO IN : The back edge is the generation position Low : The back edge is the generation position
9	GND	Ground
10	CPWID	Setting the clamp pulse width Sets the clamp pulse width according to the attached time constant. Attach a resistor between this pin and VCC and, a capacitor between this pin and GND. When R = 3.9kΩ and C = 100pF, pulse width is approximately 400 ns. Set the resistor to register an abnormality at 1kΩ.
11	VDRV	VDRV output Outputs the vertical synchronization signal. The output signal has positive polarity.
12	CLAMP	Clamp output Outputs the clamp pulse generated from the vertical synchronization signal. The output signal has a positive polarity.
13	HDRV	HDRV output Outputs the clamp pulse generated from the horizontal synchronization signal. The output signal has positive polarity.
14	Vcc	Power supply
15	EXIV	Vertical existence output Indecates whether the vertical synchronization signal exists.
16	POLV	Vertical polarity output Indicates the polarity of the vertical synchronization signal.
17	EXIH	Horizontal existence output Indicates whether the horizontal synchronization signal exists.
18	POLH	Horizontal polarity output Indicates the polarity of the horizontal synchronization signal.

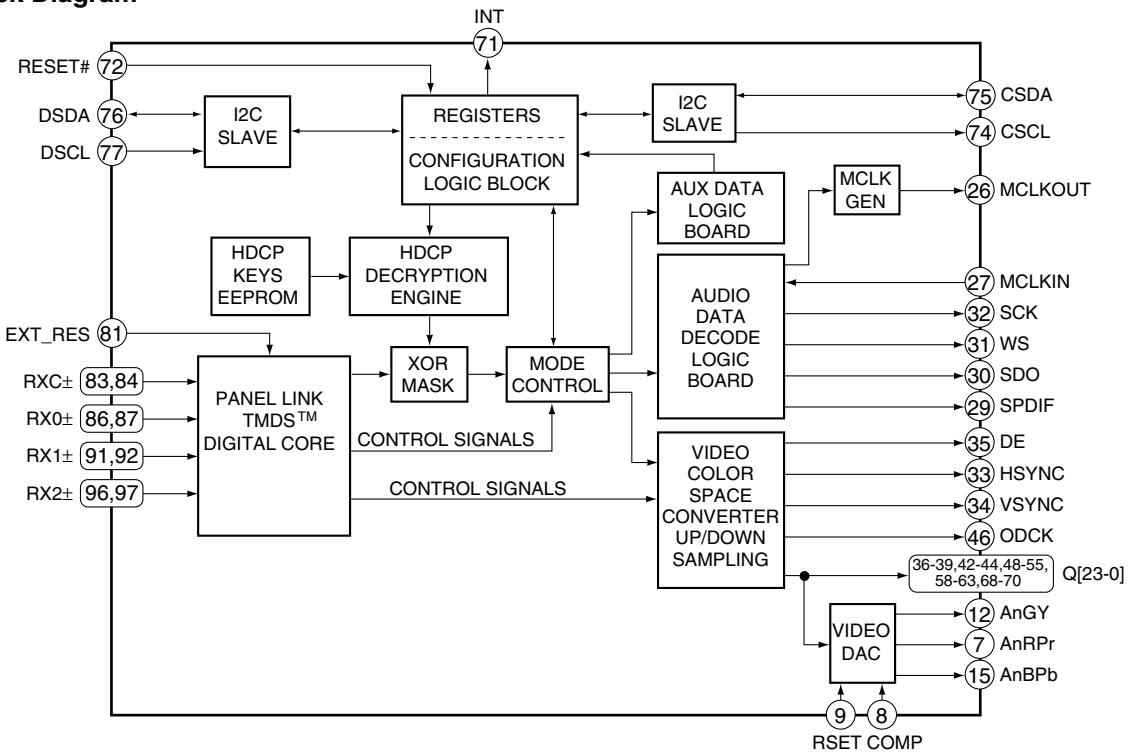
■ SII9993CTG100 (MR MAIN BOARD ASSY : IC6881, IC6801)

• HDCP Panel Link Receiver

● Pin Arrangement (Top view)



● Block Diagram



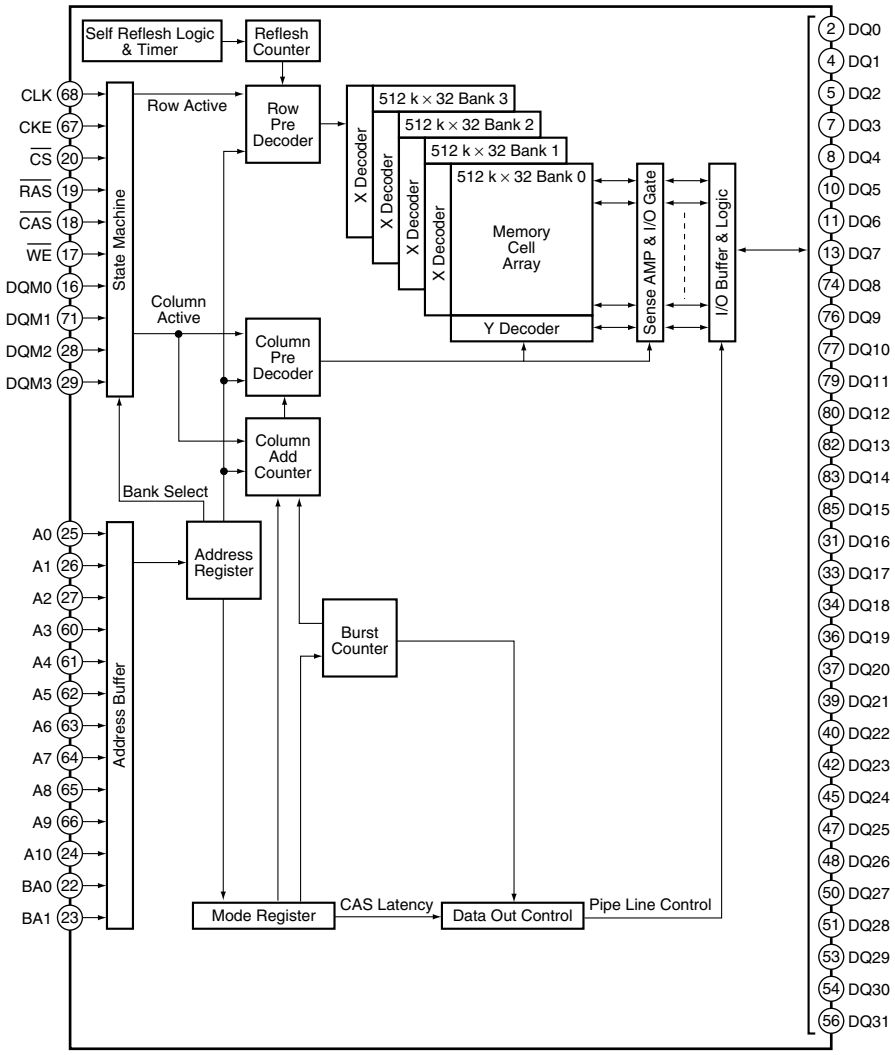
● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	DACVCC	–	DAC power supply (3.3V)	51	Q13	O	24-bit output pixel data bus
2	DACGND	–	DAC ground	52	Q12	O	24-bit output pixel data bus
3	N/C	–	No connection	53	Q11	O	24-bit output pixel data bus
4	N/C	–	No connection	54	Q10	O	24-bit output pixel data bus
5	DACGNDR	–	DAC Red ground	55	Q9	O	24-bit output pixel data bus
6	DACVCCR	–	DAC Red power supply (3.3V)	56	OVCC	–	Output bus power supply (3.3V)
7	AnRPr	O	Red, Pr output of analog video	57	OGND	–	Output bus ground
8	COMP	I	For reference amp. correction of DAC inside	58	Q8	O	24-bit output pixel data bus
9	RSET	I	Full scale adjustment resistor input	59	Q7	O	24-bit output pixel data bus
10	DACGNDG	–	DAC Green ground	60	Q6	O	24-bit output pixel data bus
11	DACVCCG	–	DAC Green power supply (3.3V)	61	Q5	O	24-bit output pixel data bus
12	AnGY	O	Green, Y output of analog video	62	Q4	O	24-bit output pixel data bus
13	DACGNDB	–	DAC Blue ground	63	Q3	O	24-bit output pixel data bus
14	DACVCCB	–	DAC Blue power supply (3.3V)	64	VCC	–	Digital power supply (3.3V)
15	AnBPb	O	Blue, Pb output of analog video	65	GND	–	Digital ground
16	GND	–	Digital ground	66	OGND	–	Output bus ground
17	VCC	–	Digital power supply (3.3V)	67	OVCC	–	Output bus power supply (3.3V)
18	RSVDL	I	Reserved Fixed to low.	68	Q2	O	24-bit output pixel data bus
19	RSVDD	O	Reserved No connection	69	Q1	O	24-bit output pixel data bus
20	RSVDD	O	Reserved No connection	70	Q0	O	24-bit output pixel data bus
21	OVCC	–	Output bus power supply (3.3V)	71	INT	O	Interruption output
22	PGND2	–	Audio PLL ground	72	RESET#	I	Reset Activ low.
23	PVCC2	–	Audio PLL power supply (3.3V)	73	RSVDL	I	Reserved Fixed to low.
24	PLLIN	I/O	PLL filter input	74	CSCL	I	Configuration I2C clock
25	PLLOUT	I/O	PLL filter output	75	CSDA	I/O	Configuration I2C data
26	MCCLKOUT	O	Audio master clock output	76	DSDA	I/O	DDC I2C data
27	MCCLKIN	I	Reference audio master clock input	77	DSCL	I	DDC I2C clock
28	OGND	–	Output bus ground	78	OGND	–	Output bus ground
29	SPDIF	O	SPDIF audio output	79	PGND1	–	PLL ground
30	SDO	O	I2S serial data output	80	PVCC1	–	PLL power supply (3.3V)
31	WS	O	I2S word selecting output	81	EXT_RES	I	Input impedance adjustment
32	SCK	O	I2S serial clock output	82	AVCC	–	Analog power supply (3.3V)
33	HSYNC	O	Horizontal sync. control signal output	83	RXC-	I	TMDS data input
34	VSYNC	O	Vertical sync. control signal output	84	RXC+	I	TMDS data input
35	DE	O	Data enable	85	AGND	–	Analog ground
36	Q23	O	24-bit output pixel data bus	86	RX0-	I	TMDS data input
37	Q22	O	24-bit output pixel data bus	87	RX0+	I	TMDS data input
38	Q21	O	24-bit output pixel data bus	88	AGND	–	Analog ground
39	Q20	O	24-bit output pixel data bus	89	AVCC	–	Analog power supply (3.3V)
40	VCC	–	Digital power supply (3.3V)	90	AGND	–	Analog ground
41	GND	–	Digital ground	91	RX1-	I	TMDS data input
42	Q19	O	24-bit output pixel data bus	92	RX1+	I	TMDS data input
43	Q18	O	24-bit output pixel data bus	93	AVCC	–	Analog power supply (3.3V)
44	Q17	O	24-bit output pixel data bus	94	AGND	–	Analog ground
45	OGND	–	Output bus ground	95	AVCC	–	Analog power supply (3.3V)
46	ODCK	O	Data clock output	96	RX2-	I	TMDS data input
47	OVCC	–	Output bus power supply (3.3V)	97	RX2+	I	TMDS data input
48	Q16	O	24-bit output pixel data bus	98	AGND	–	Analog ground
49	Q15	O	24-bit output pixel data bus	99	GND	–	Digital ground
50	Q14	O	24-bit output pixel data bus	100	VCC	–	Digital power supply (3.3V)

■ HY57V643220CT-7 (MR MAIN BOARD ASSY : IC7001, IC7002) (or K4S643232H-TC60-K)

• Synchronous DRAM

● Block Diagram



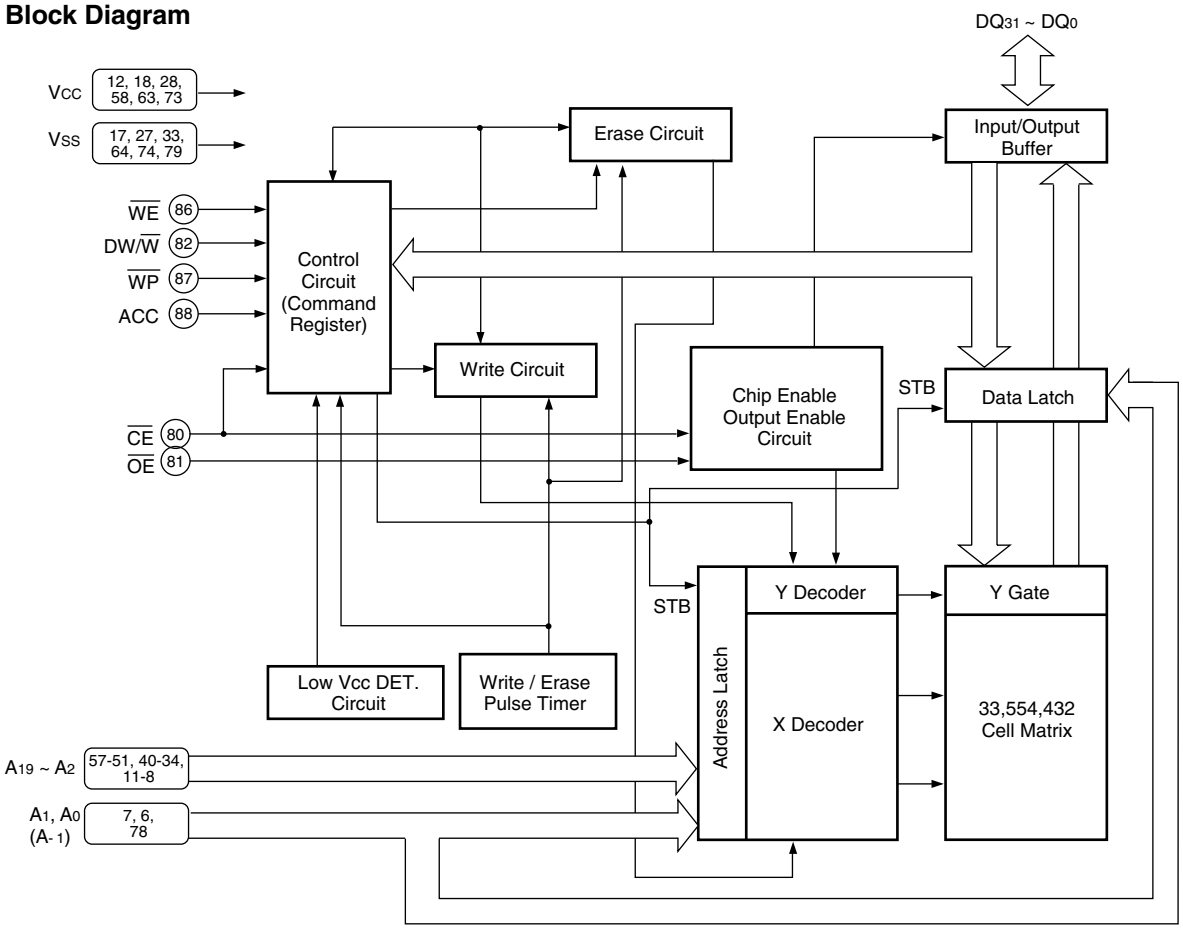
● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	VDD	–	Power supply	44	VSS	–	Ground
2	DQ0	I/O	Data input/output	45	DQ24	I/O	Data input/output
3	VDDQ	–	Power supply for output buffer	46	VSSQ	–	Ground for output buffer
4	DQ1	I/O	Data input/output	47	DQ25	I/O	Data input/output
5	DQ2	I/O	Data input/output	48	DQ26	I/O	Data input/output
6	VSSQ	–	Ground for output buffer	49	VDDQ	–	Power supply for output buffer
7	DQ3	I/O	Data input/output	50	DQ27	I/O	Data input/output
8	DQ4	I/O	Data input/output	51	DQ28	I/O	Data input/output
9	VDDQ	–	Power supply for output buffer	52	VSSQ	–	Ground for output buffer
10	DQ5	I/O	Data input/output	53	DQ29	I/O	Data input/output
11	DQ6	I/O	Data input/output	54	DQ30	I/O	Data input/output
12	VSSQ	–	Ground for output buffer	55	VDDQ	–	Power supply for output buffer
13	DQ7	I/O	Data input/output	56	DQ31	I/O	Data input/output
14	NC	–	No connection	57	NC	–	No connection
15	VDD	–	Power supply	58	VSS	–	Ground
16	DQM0	I	Data input/output mask	59	DQM3	I	Data input/output mask
17	/WE	I	Write enable	60	A3	I	Address input
18	/CAS	I	Column address strobe	61	A4	I	Address input
19	/RAS	I	Row address strobe	62	A5	I	Address input
20	/CS	I	Chip select input	63	A6	I	Address input
21	NC	–	No connection	64	A7	I	Address input
22	BA0	I	Bank address input	65	A8	I	Address input
23	BA1	I	Bank address input	66	A9	I	Address input
24	A10/AP	I	Address input	67	CKE	I	Clock enable
25	A0	I	Address input	68	CLK	I	System clock input
26	A1	I	Address input	69	NC	–	No connection
27	A2	I	Address input	70	NC	–	No connection
28	DQM2	I	Data input/output mask	71	DQM1	I	Data input/output mask
29	VDD	–	Power supply	72	VSS	–	Ground
30	NC	–	No connection	73	NC	–	No connection
31	DQ16	I/O	Data input/output	74	DQ8	I/O	Data input/output
32	VSSQ	–	Ground for output buffer	75	VDDQ	–	Power supply for output buffer
33	DQ17	I/O	Data input/output	76	DQ9	I/O	Data input/output
34	DQ18	I/O	Data input/output	77	DQ10	I/O	Data input/output
35	VDDQ	–	Power supply for output buffer	78	VSSQ	–	Ground for output buffer
36	DQ19	I/O	Data input/output	79	DQ11	I/O	Data input/output
37	DQ20	I/O	Data input/output	80	DQ12	I/O	Data input/output
38	VSSQ	–	Ground for output buffer	81	VDDQ	–	Power supply for output buffer
39	DQ21	I/O	Data input/output	82	DQ13	I/O	Data input/output
40	DQ22	I/O	Data input/output	83	DQ14	I/O	Data input/output
41	VDDQ	–	Power supply for output buffer	84	VSSQ	–	Ground for output buffer
42	DQ23	I/O	Data input/output	85	DQ15	I/O	Data input/output
43	VDD	–	Power supply	86	VSS	–	Ground

■ MBM29PL3200BE70PFV (MR MAIN BOARD ASSY : IC7152)

• Page Mode Flash Memory

● Block Diagram



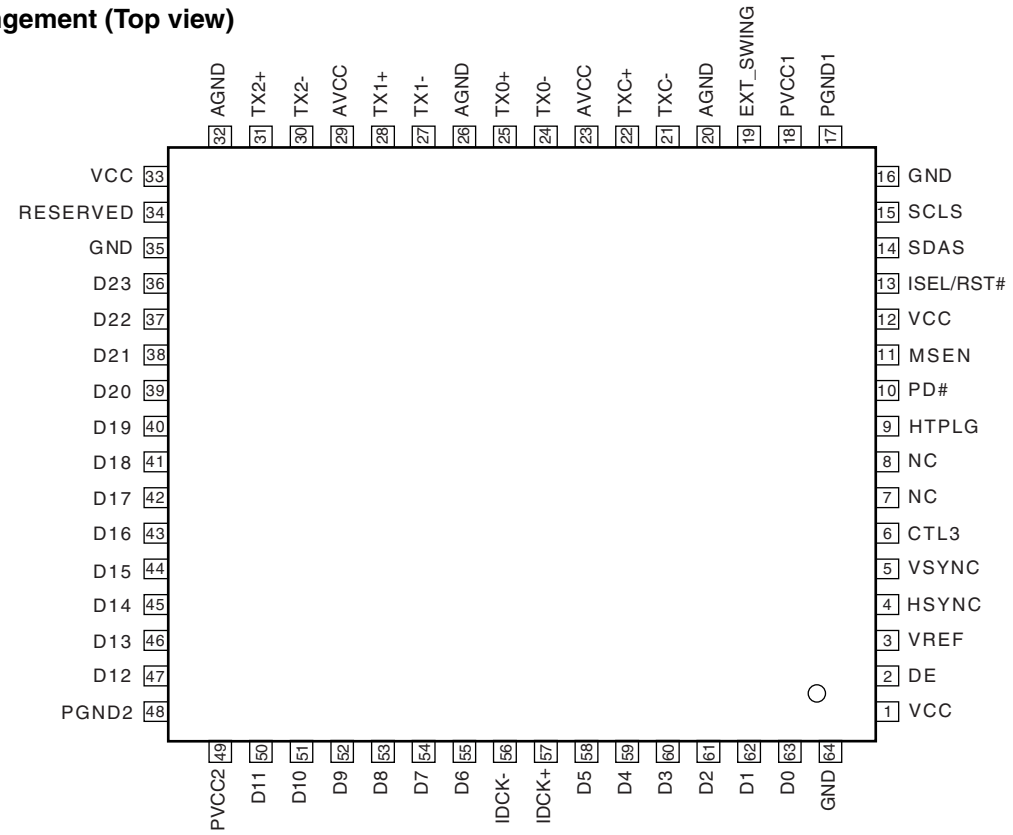
● Pin Function

No.	Pin Name	I/O	Pin Function
57-51, 40-34, 11-6, 78	A_{19} - A_0, A_{-1}	I	Address input
78-75, 72-65, 62-59, 32-19, 26-19, 16-13	DQ_{31} - DQ_0	I/O	Data input/output
80	CE	I	Chip enable
81	OE	I	Output enable
86	WE	I	Write enable
82	DW/W	I	16 bit, 32 bit mode switch
87	WP	I	Write protect
88	ACC	I	Acceleration
17, 27, 33, 64, 74, 79	V_{SS}	–	Ground
12, 18, 28, 58, 63, 73	V_{CC}	–	Power supply
1-5, 41-50, 83-85, 89, 90	N.C.	–	No connection

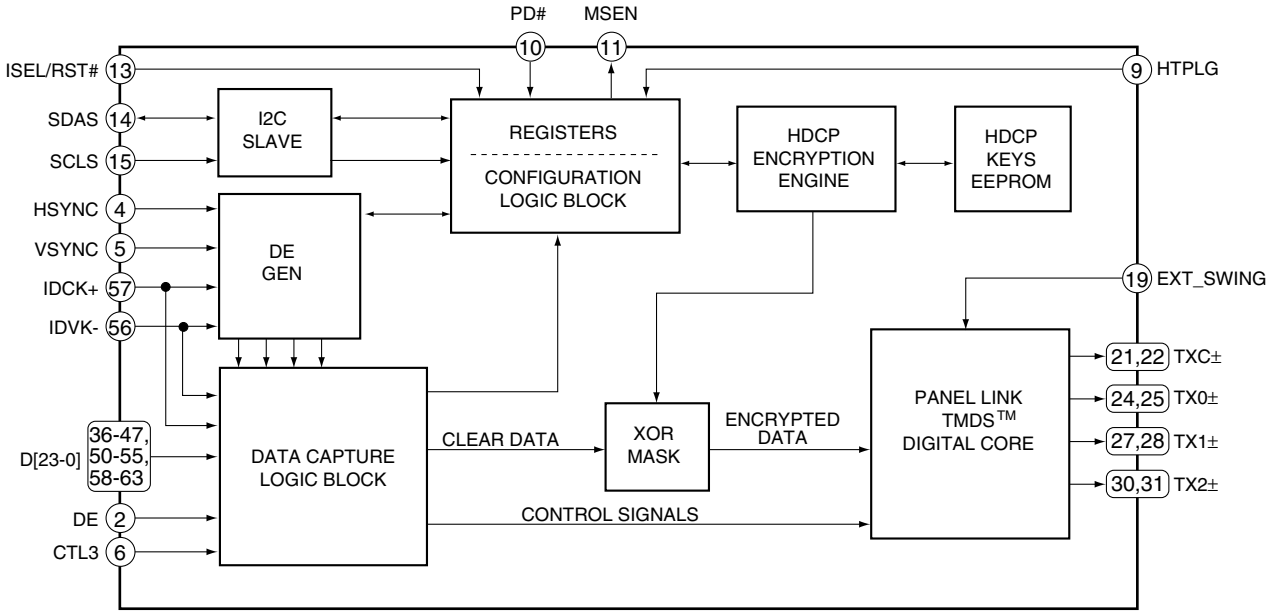
■ SII170BCLG64 (MR MAIN BOARD ASSY : IC7401)

• HDCP Panel Link Transmitter

● Pin Arrangement (Top view)



● Block Diagram



● **Pin Function**

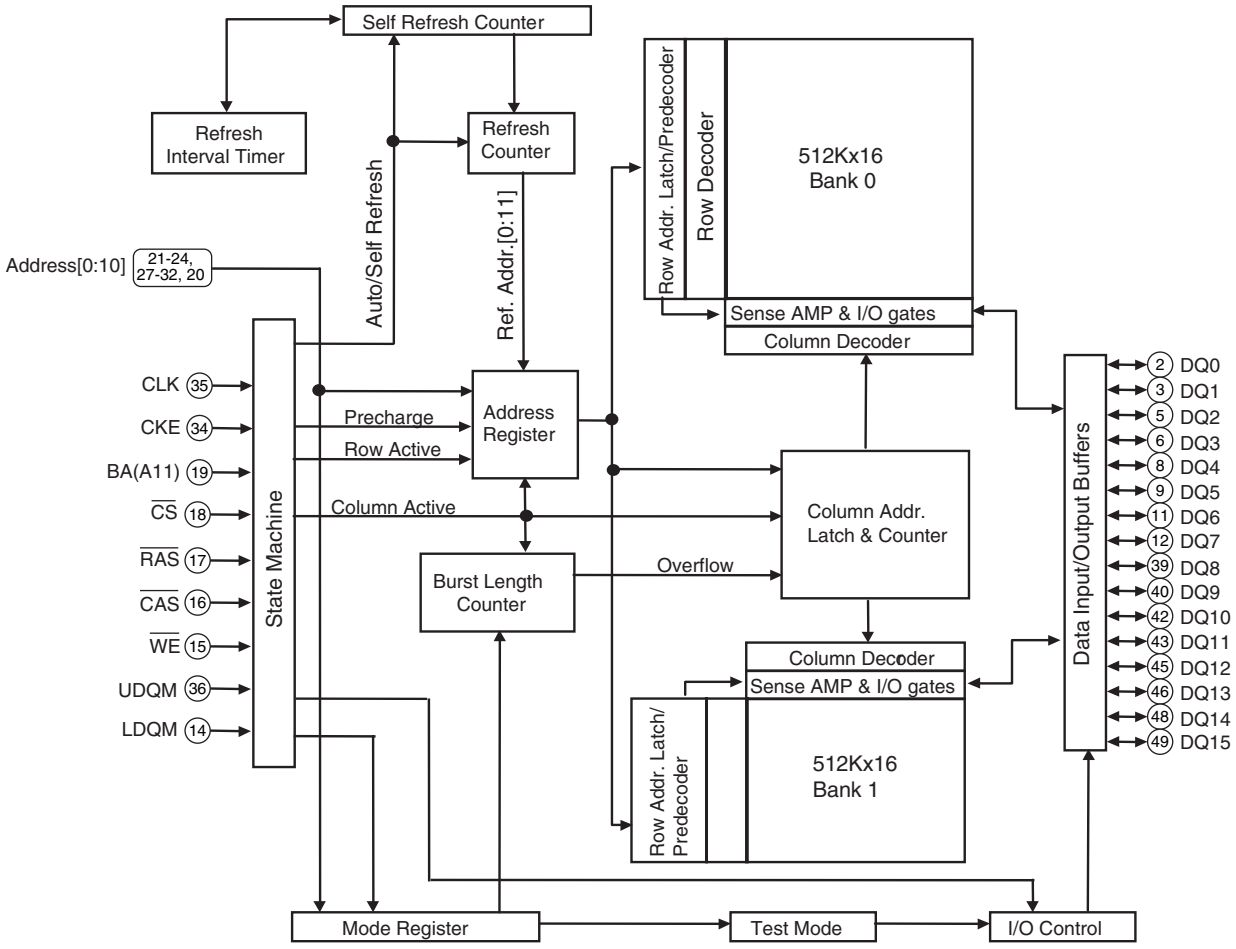
No.	Pin Name	I/O	Pin Function
1	VCC	–	Digital power supply (3.3V)
2	DE	I	Data enable
3	VREF	I	3.3V fixed
4	HSYNC	I	Horizontal sync. control signal input
5	VSYNC	I	Vertical sync. control signal input
6	CTL3	I	External CTL3 input
7	NC	–	No connection
8	NC	–	No connection
9	HTPLG	I	Monitor chrage input
10	PD#	I	Power down input (Active low)
11	MSEN	O	Monitor sense output (open-collector output)
12	VCC	–	Digital power supply (3.3V)
13	ISEL/RST#	I	I2C interface selecting input High: I2C interface is active
14	SDAS	I/O	DDC I2C data input/output
15	SCLS	I	DDC I2C clock input
16	GND	–	Digital ground
17	PGND1	–	PLL analog ground
18	PVCC1	–	Analog power supply for PLL of primary side (3.3V)
19	EXT_SWING	I	Voltage regulation adjustment
20	AGND	–	Analog ground
21	TXC-	O	Differential signal clock output of TMDS Low voltage
22	TXC+	O	Differential signal clock output of TMDS Low voltage
23	AVCC	–	Analog power supply (3.3V)
24	TX0-	O	Differential signal clock output of TMDS Low voltage
25	TX0+	O	Differential signal clock output of TMDS Low voltage
26	AGND	–	Analog ground
27	TX1-	O	Differential signal clock output of TMDS Low voltage
28	TX1+	O	Differential signal clock output of TMDS Low voltage
29	AVCC	–	Analog power supply (3.3V)
30	TX2-	O	Differential signal clock output of TMDS Low voltage
31	TX2+	O	Differential signal clock output of TMDS Low voltage
32	AGND	–	Analog ground
33	VCC	–	Digital power supply (3.3V)
34	RESERVED	I	Reserved pin for Silicon Image Normally, fixed to low.
35	GND	–	Digital ground
36	D23	I	24-bit pixel bus input
37	D22	I	24-bit pixel bus input
38	D21	I	24-bit pixel bus input
39	D20	I	24-bit pixel bus input
40	D19	I	24-bit pixel bus input
41	D18	I	24-bit pixel bus input
42	D17	I	24-bit pixel bus input
43	D16	I	24-bit pixel bus input
44	D15	I	24-bit pixel bus input
45	D14	I	24-bit pixel bus input

No.	Pin Name	I/O	Pin Function
46	D13	I	24-bit pixel bus input
47	D12	I	24-bit pixel bus input
48	PGND2	–	PLL analog ground
49	PVCC2	–	Analog power supply for filter PLL (3.3V)
50	D11	I	24-bit / 12-bit pixel bus input
51	D10	I	24-bit / 12-bit pixel bus input
52	D9	I	24-bit / 12-bit pixel bus input
53	D8	I	24-bit / 12-bit pixel bus input
54	D7	I	24-bit / 12-bit pixel bus input
55	D6	I	24-bit / 12-bit pixel bus input
56	IDCK-	I	Data clock - input
57	IDCK+	I	Data clock + input
58	D5	I	24-bit / 12-bit pixel bus input
59	D4	I	24-bit / 12-bit pixel bus input
60	D3	I	24-bit / 12-bit pixel bus input
61	D2	I	24-bit / 12-bit pixel bus input
62	D1	I	24-bit / 12-bit pixel bus input
63	D0	I	24-bit / 12-bit pixel bus input
64	GND	–	Digital ground

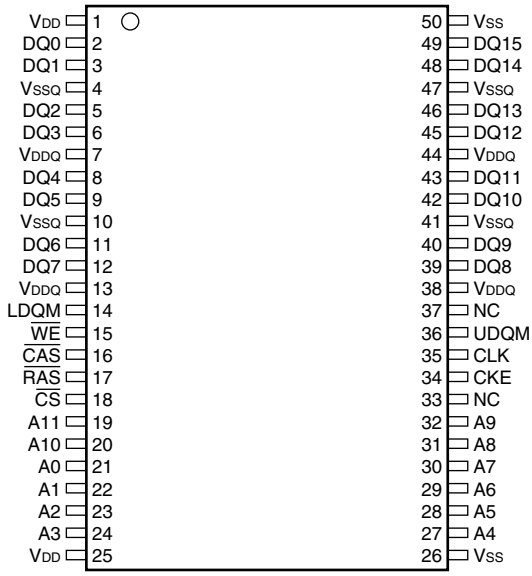
■ HY57V161610DTC-8 (MR MAIN BOARD ASSY : IC6106) (or K4S161622H-TC60-K)

• 16M SDRAM

● Block Diagram



● Pin Arrangement (Top view)



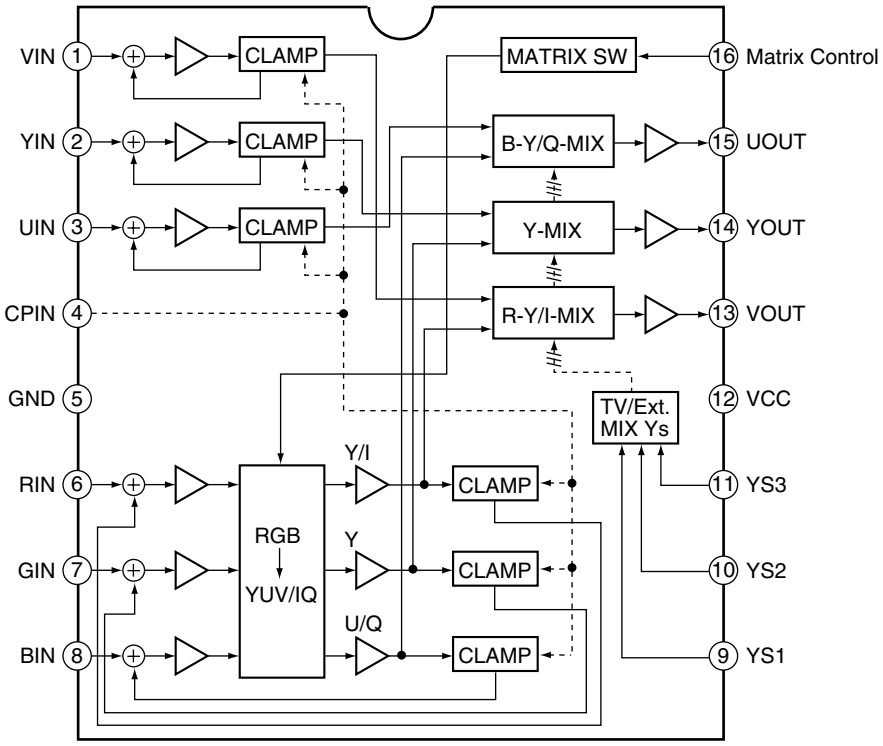
● Pin Function

No.	Pin Name	I/O	Pin Function
1	VDD	–	Power supply
2	DQ0	I/O	Data input/output
3	DQ1	I/O	Data input/output
4	VSSQ	–	Ground for DQ
5	DQ2	I/O	Data input/output
6	DQ3	I/O	Data input/output
7	VDDQ	–	Power supply for DQ
8	DQ4	I/O	Data input/output
9	DQ5	I/O	Data input/output
10	VSSQ	–	Ground for DQ
11	DQ6	I/O	Data input/output
12	DQ7	I/O	Data input/output
13	VDDQ	–	Power supply for DQ
14	LDQM	I	Data input/output mask
15	/WE	I	Write enable
16	/CAS	I	Column address strobe
17	/RAS	I	Row address strobe
18	/CS	I	Chip select input
19	A11	I	Address input
20	A10	I	Address input
21	A0	I	Address input
22	A1	I	Address input
23	A2	I	Address input
24	A3	I	Address input
25	VDD	–	Power supply
26	VSS	–	Ground
27	A4	I	Address input
28	A5	I	Address input
29	A6	I	Address input
30	A7	I	Address input
31	A8	I	Address input
32	A9	I	Address input
33	NC	–	No connection
34	CKE	I	Clock enable
35	CLK	I	System clock input
36	UDQM	I	Data input/output mask
37	NC	–	No connection
38	VDDQ	–	Power supply for DQ
39	DQ8	I/O	Data input/output
40	DQ9	I/O	Data input/output
41	VSSQ	–	Ground for DQ
42	DQ10	I/O	Data input/output
43	DQ11	I/O	Data input/output
44	VDDQ	–	Power supply for DQ
45	DQ12	I/O	Data input/output
46	DQ13	I/O	Data input/output
47	VSSQ	–	Ground for DQ
48	DQ14	I/O	Data input/output
49	DQ15	I/O	Data input/output
50	VSS	–	Ground

■ TA1287FG (AV BOARD ASSY : IC8905)

• RGB to YUV/IQ High-speed Matrix IC

● Block Diagram



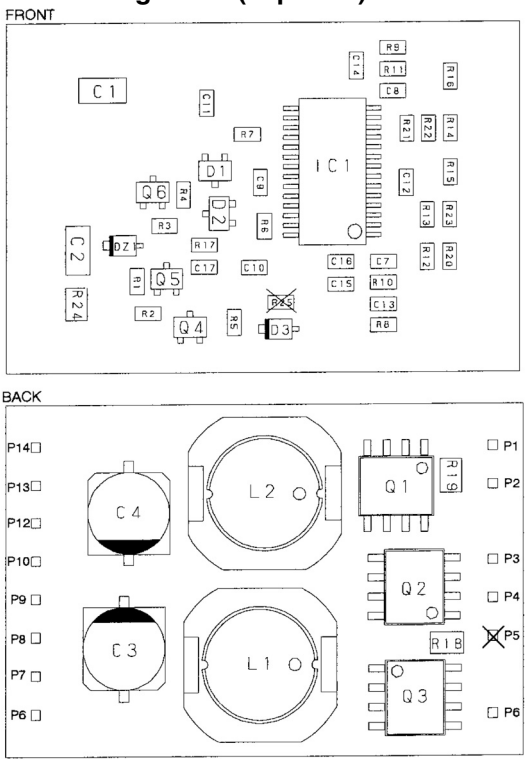
● Pin Function

No.	Pin Name	I/O	Pin Function
1	VIN	I	Input R-Y (V) or R signal through a clamping capacitor.
2	YIN	I	Input Y or G signal through a clamping capacitor.
3	UIN	I	Input B-Y (U) or B signal through a clamping capacitor.
4	CPIN	I	Input clamping pulse. Threshold: 0.75V
5	GND	–	Ground
6	RIN	I	Input R or R-Y (V) signal through a clamping capacitor.
7	GIN	I	Input G or Y signal through a clamping capacitor.
8	BIN	I	Input B or B-Y (U) signal through a clamping capacitor.
9	YS1	I	Select to switch mixing ratio. Threshold: 0.75V
10	YS2	I	Select to switch mixing ratio. Threshold: 0.75V
11	YS3	I	Select to switch mixing ratio. Threshold: 0.75V
12	VCC	–	Power supply 9V
13	VOUT	O	Output R-Y (V) or R signal.
14	YOUT	O	Output Y or G signal.
15	UOUT	O	Output B-Y (U) or B signal.
16	Matrix Control	I	This pin's voltage control the matrix coefficient for output signals. Selects the output mode.

■ AXY1088 (AV BOARD ASSY : U8502, U8503)

• DC-DC Converter Unit

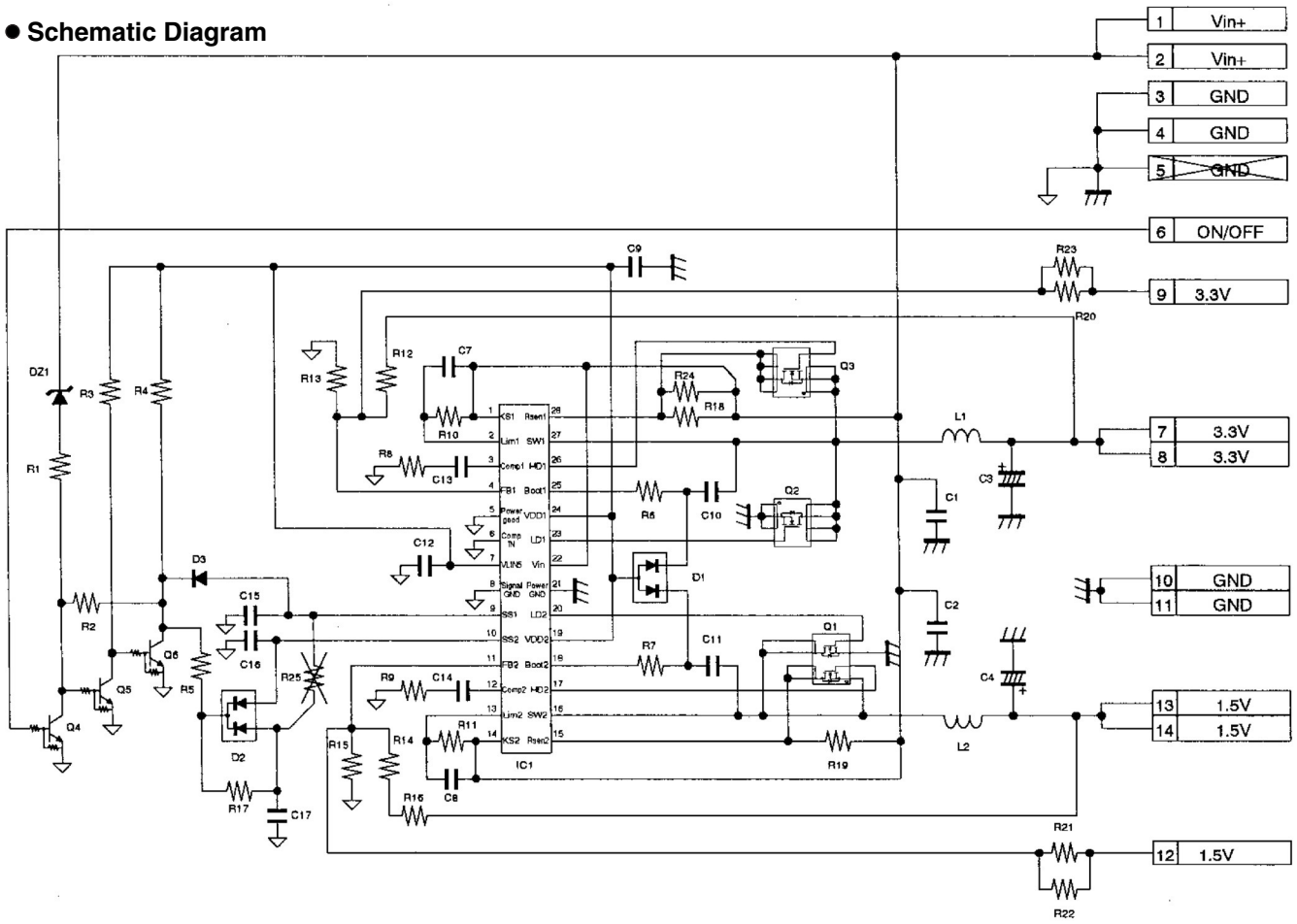
● Pin Arrangement (Top view)



● Pin Function

No.	Pin Name	Pin Function
1	Vin	12V input
2	Vin	12V input
3	GND	Input side GND
4	GND	Input side GND
5	Omission terminal	Omission terminal
6	ON/OFF	Output ON/OFF
7	Vo1	3.3V output
8	Vo1	3.3V output
9	Vo1adj	3.3V variable output
10	GND	GND
11	GND	GND
12	Vo2adj	1.5V variable output
13	Vo2	1.5V output
14	Vo2	1.5V output

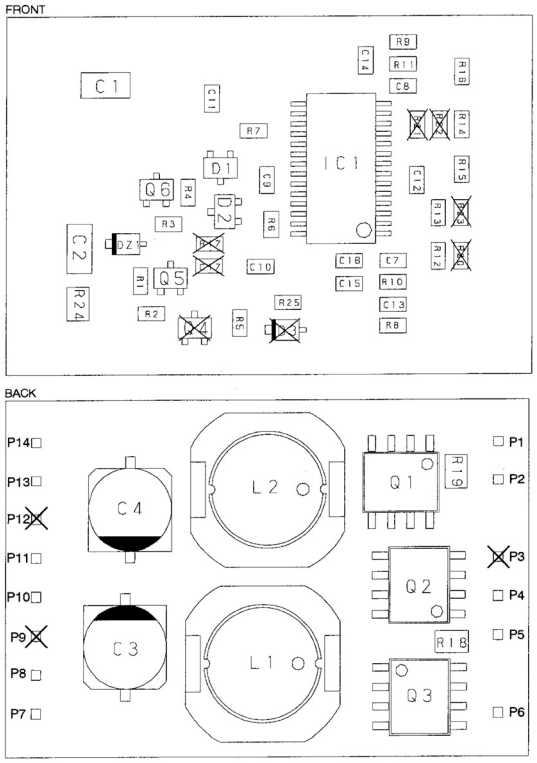
● Schematic Diagram



■ AXY1089 (AV BOARD ASSY : U8504)

• DC-DC Converter Unit

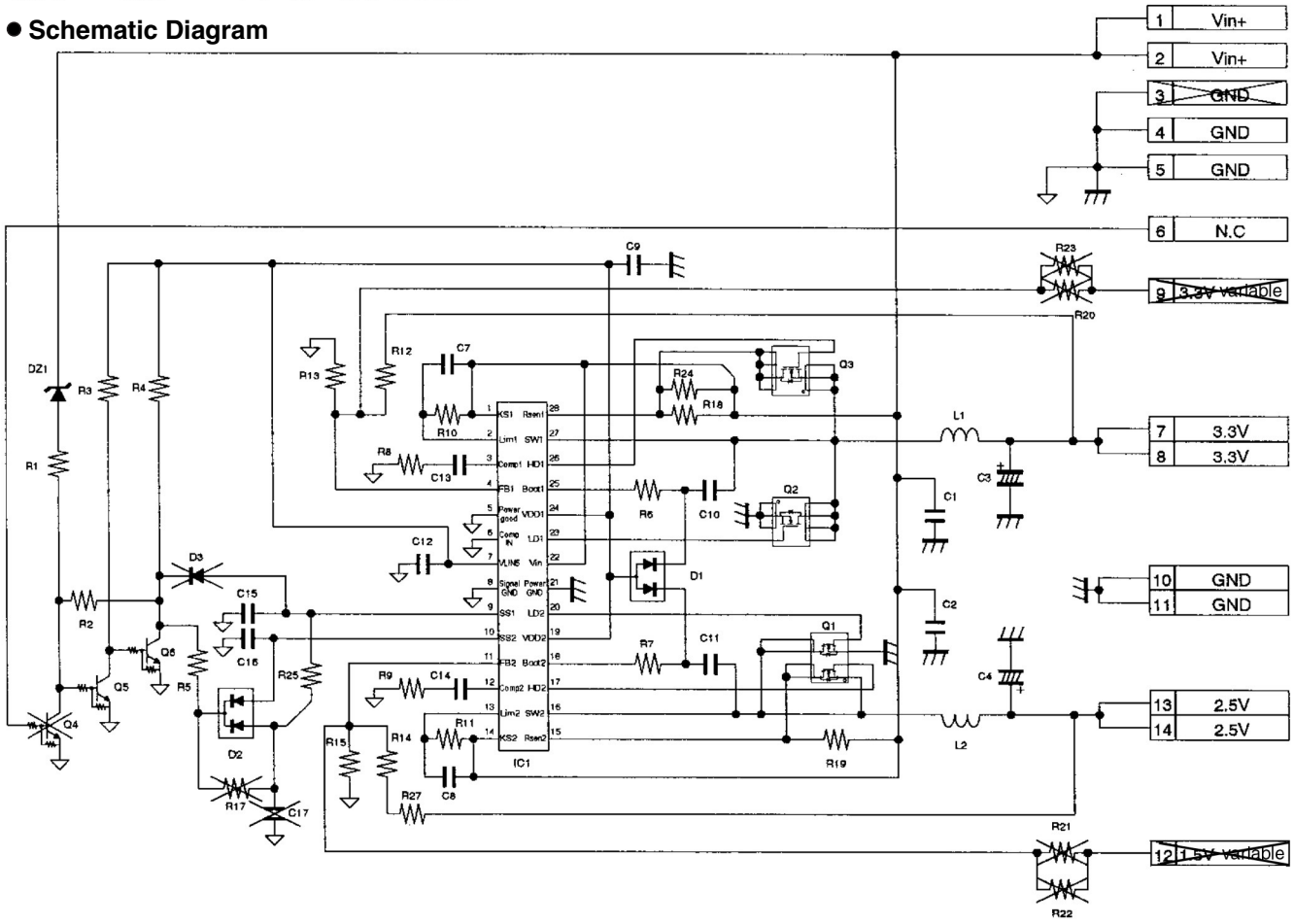
● Pin Arrangement (Top view)



● Pin Function

No.	Pin Name	Pin Function
1	Vin	6.5V input
2	Vin	6.5V input
3	Omission terminal	Omission terminal
4	GND	Input side GND
5	GND	Input side GND
6	N.C	N.C
7	Vo1	3.3V output
8	Vo1	3.3V output
9	Omission terminal	Omission terminal
10	GND	GND
11	GND	GND
12	Omission terminal	Omission terminal
13	Vo2	2.5V output
14	Vo2	2.5V output

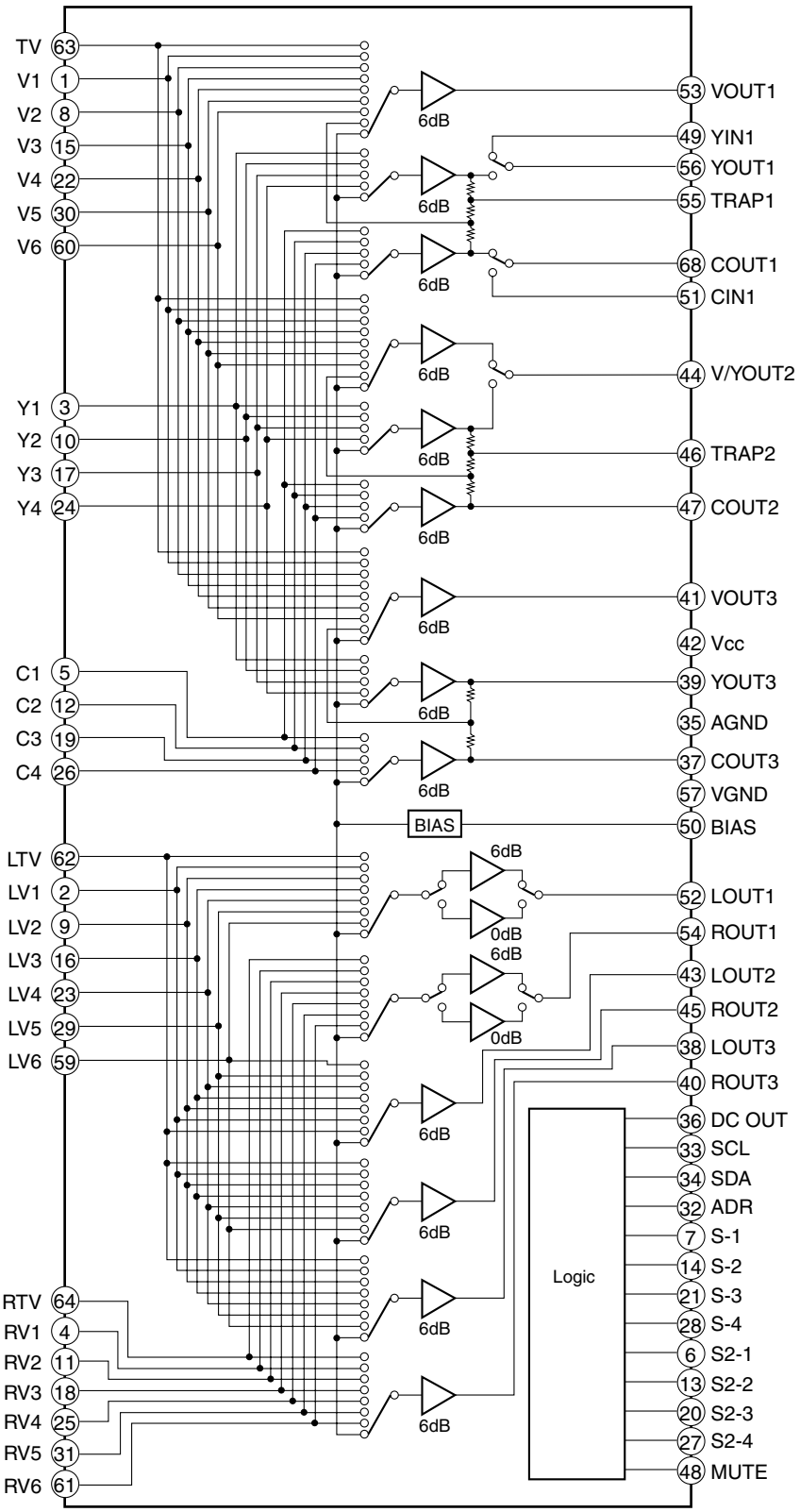
● Schematic Diagram



■ CXA2069Q (AV BOARD ASSY : IC8002)

• 7-Input 3-Output Audio/Video Switch

● Block Diagram



● Pin Function

No.	Pin Name	I/O	Pin Function
63 1 8 15 22 30 60	TV V1 V2 V3 V4 V5 V6	I	Video signal inputs. Input composite video signals.
3 10 17 24 49	Y1 Y2 Y3 Y4 YIN1	I	Y/C separation signal inputs. Input luminance signals. The YIN1 pin inputs the signal obtained by Y/C separating the VOUT1 pin output.
5 12 19 26 51	C1 C2 C3 C4 CIN1	I	Y/C separation signal inputs. Input chrominance signals. The CIN1 pin inputs the signal obtained by Y/C separating the VOUT1 pin output.
62, 2 9, 16 23, 29 59, 64 4, 11 18, 25 31, 61	LTV, LV1 LV2, LV3 LV4, LV5 LV6, RTV RV1, RV2 RV3, RV4 RV5, RV6	I	Audio signal inputs.
53 41	VOUT1 VOUT3	O	Video signal outputs. Output composite video signals.
44	V/YOUT2	O	Video signal output. Either composite video signal output or luminance signal output can be selected by I2C bus control.
56 39	YOUT1 YOUT3	O	Video signal outputs. Output luminance signals.
58 47 37	COUT1 COUT2 COUT3	O	Video signal outputs. Output chrominance signals.
52 43 38 54 45 40	LOUT1 LOUT2 LOUT3 ROUT1 ROUT2 ROUT3	O	Audio signal outputs. Zo=50 ohm (within DC ± 2mA)
6 13 20 27	S2-1 S2-2 S2-3 S2-4	–	Detects the S2-compatible DC superimposed onto the C signal. 4 : 3 video signal at 1.3 V or less 4 : 3 letter-box signal at 1.3 V or more to 2.5 V or less 16 : 9 picture squeezed signal at 2.5 V or more This pin is pulled down to GND by a 100 k ohm resistor, so the 4 : 3 video signal is selected when open.

No.	Pin Name	I/O	Pin Function
7 14 21 28	S-1 S-2 S-3 S-4	–	Composite video/S selector. The detection results are written to the status register. S signal at 3.5 V or less. Composite video signal at 3.5 V or more. This pin is pulled up to 5 V by a 100 k ohm resistor, so the composite video signal is selected when open.
32	ADR	–	Selects the slave address for the I2C bus. 90H at 1.5 V or less 92H at 2.5 V or more 90H when open.
33	SCL	I	I2C bus signal input VILmax=1.5 V VIHmin=3.0 V
34	SDA	I	I2C bus signal input VILmax=1.5 V VIHmin=3.0 V VOLmax=0.4 V
36	DC_OUT	O	Outputs the S2-compatible DC superimposed onto the COUT3 output. The DC is superimposed by connecting this pin to the COUT3 output via a capacitor. Control is performed by the I2C bus. When 0 V is output, Q1 is ON and the impedance is 5 k ohm. S2 protocol output impedance of 10 ± 3 k ohm is realized by attaching external resistance of 4.7 k ohm. DC_OUT (bus) Output DC 0 4.5 V 1 0 V 2 1.9 V 3 4.5 V
55 46	TRAP1 TRAP2	–	Connects trap circuit for subcarrier.
48	MUTE	–	Audio signal output mute. Mute OFF at 1.5 V or less Mute ON at 2.5 V or more Mute OFF when open.
50	BIAS	–	Internal reference bias (VCC/2). Connect to GND via a capacitor.

7.4 CLEANING

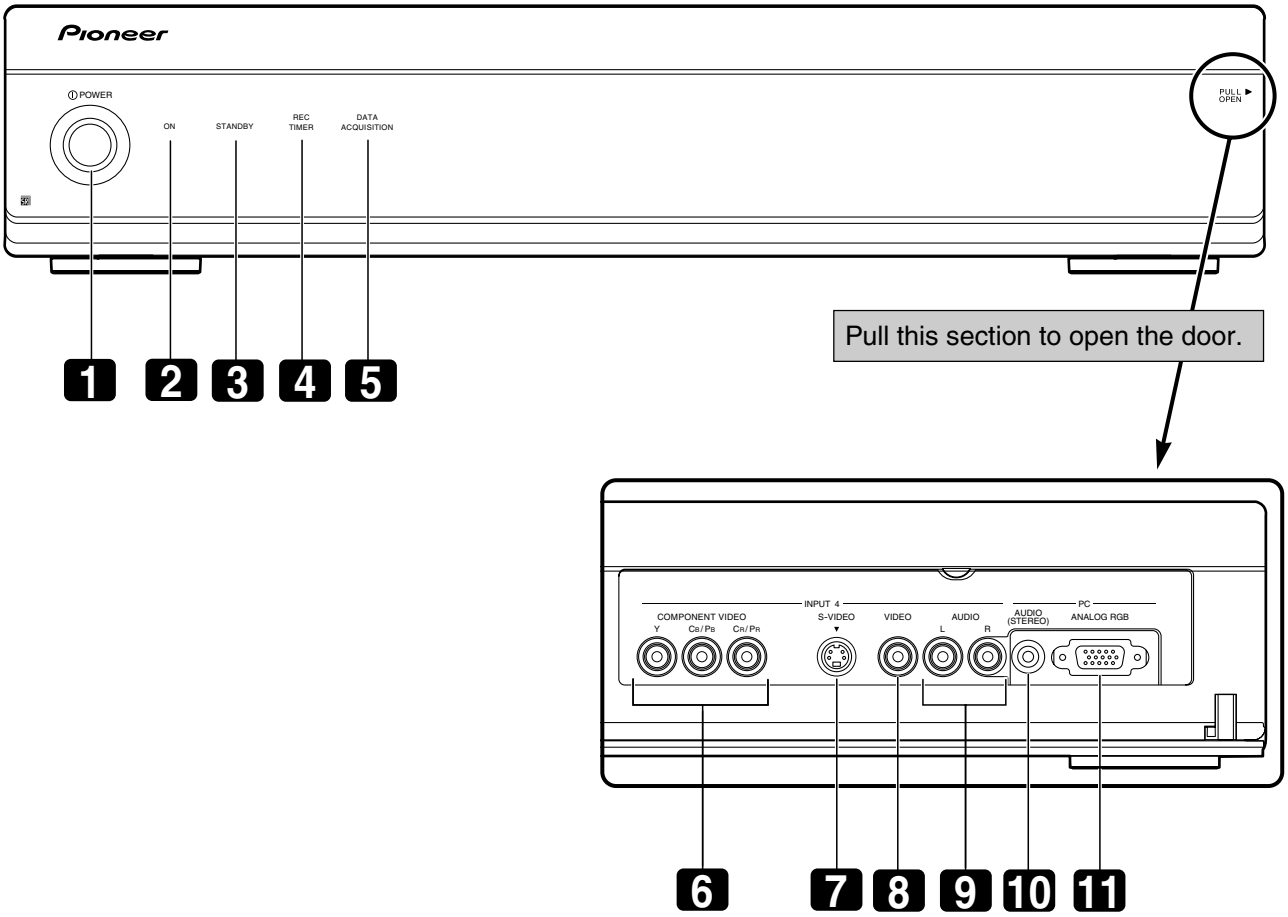
Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

8. PANEL FACILITIES

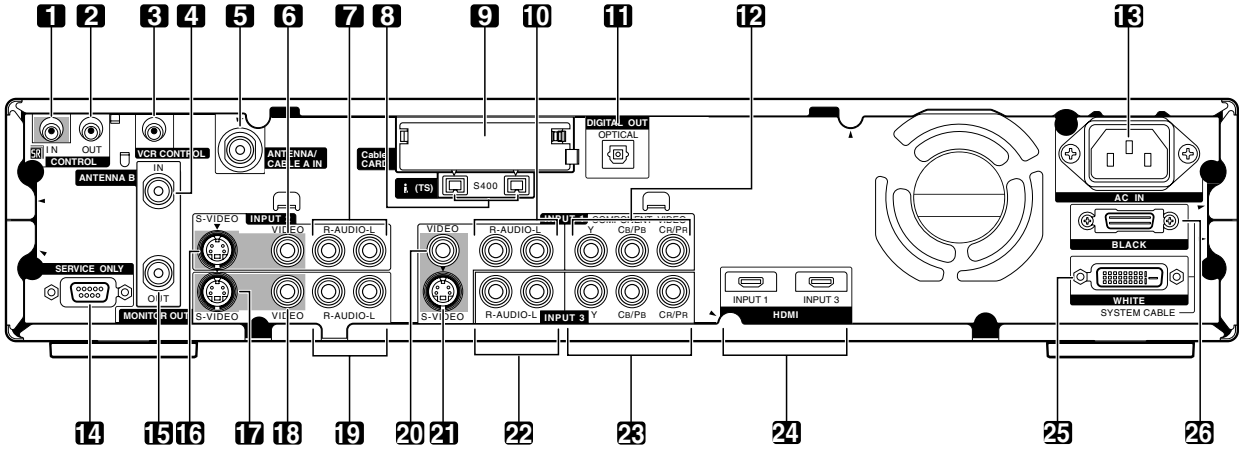
Media Receiver

Front view



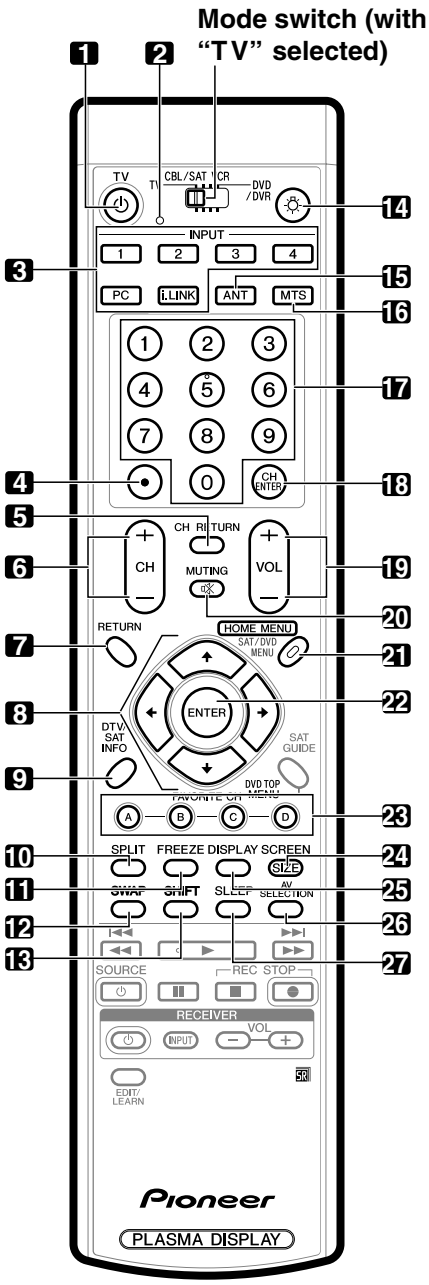
1 **POWER** button
2 POWER ON indicator
3 STANDBY indicator
4 REC TIMER indicator
5 DATA ACQUISITION indicator
6 INPUT 4 terminals (COMPONENT VIDEO: Y, C_B/P_B, C_R/P_R)
7 INPUT 4 terminal (S-VIDEO)
8 INPUT 4 terminal (VIDEO)
9 INPUT 4 terminals (AUDIO)
10 PC INPUT terminal (AUDIO)
11 PC INPUT terminal (ANALOG RGB)

Rear view



1 CONTROL IN terminal
2 CONTROL OUT terminal
3 VCR CONTROL terminal
4 ANTENNA B IN terminal
5 ANTENNA/CABLE A IN terminal
6 INPUT 2 terminal (VIDEO)
7 INPUT 2 terminals (AUDIO)
8 i.LINK terminals
9 Cable CARD slot
10 INPUT 1 terminals (AUDIO)
11 DIGITAL OUT terminal (OPTICAL)
12 INPUT 1 terminals (COMPONENT VIDEO: Y,C_B/P_B, C_R/P_R)
13 AC IN terminal
14 RS-232C terminal (used for factory setup)
15 ANTENNA B OUT terminal
16 INPUT 2 terminal (S-VIDEO)
17 MONITOR OUT terminal (S-VIDEO)
18 MONITOR OUT terminal (VIDEO)
19 MONITOR OUT terminals (AUDIO)
20 INPUT 1 terminal (VIDEO)
21 INPUT 1 terminal (S-VIDEO)
22 INPUT 3 terminals (AUDIO)
23 INPUT 3 terminals (COMPONENT VIDEO: Y,C_B/P_B, C_R/P_R)
24 HDMI terminals (INPUT1/INPUT3)
25 SYSTEM CABLE terminal (WHITE)
26 SYSTEM CABLE terminal (BLACK)

Remote control unit



With the mode switch set to TV

1 **TV** ⏻ : Turns on the power to the Plasma Display or places it into standby mode.

2 Transmission confirmation LED

3 **INP UT** : Selects an input source of the Plasma Display. (INPUT 1, INPUT 2, INPUT 3, INPUT 4,PC, i.LINK)

4 **• (dot)** : Enters a dot.

5 **CH RETURN** : Returns to the previous channel.

6 **CH +/–**: Selects the channel.

7 **RETURN** : Returns to the previous menu screen.

8 **↑/↓/←/→**: Selects a desired item on the menu screen.

9 **DTV INFO** : Shows more information on DTV programs.

10 **SPLIT** : Switches the screen mode among 2-screen, picture-in-picture, and single-screen .

11 **FREEZE** : Freezes a frame from a moving image. Press again to cancel the function .

12 **SWAP**: Switches between the two screens when in the 2-screen or picture-in-picture mode.

13 **SHIFT** : Moves the location of the small screen when in the picture-in-picture mode.

14 ☼ : When pressed, all buttons on the remote control unit will light. The lighting will turn off if no operations are per formed within about 5 seconds. This button is used for performing operations in dark places.

15 **ANT** : Selects the antenna (A, B).

16 **MTS** : Selects the MTS/SAP.

17 **0 – 9**: Selects the channel.

18 **CH ENTER**: Executes a channel number.

19 **VOL +/–** : Sets the volume.

20 🔇 **MUTING** : Mutes the sound.

21 **HOME MENU**: Displays the menu screen .

22 **ENTER**: Executes a command.

23 **FAVORITE CH (A, B, C, D**):
Selects any of the four preset channels. See page 37 for details to set the FAVORITE CH While watching, you can toggle the set channels by pressing **A**, **B**, **C** and **D**.

24 **SCREEN SIZE** : Selects the screen size.

25 **DISPL AY**: Displays the channel information .

26 **AV SELECTION** : Selects audio and video settings. (A V mode: STANDARD, DYNAMIC, MOVIE, GAME, USER . PC mode : STANDARD,USER .)

27 **SLEEP**: Sets the sleep timer.

NOTE

- When using the remote control unit, point it at the Plasma Display
- See pages 62 to 68 for operating buttons not listed on this page.